CANADIAN JOURNAL of EMERGENCY NURSING

JOURNAL CANADIEN des INFIRMIÈRES D'URGENCE

THE OFFICIAL JOURNAL OF THE NATIONAL EMERGENCY NURSES ASSOCIATION

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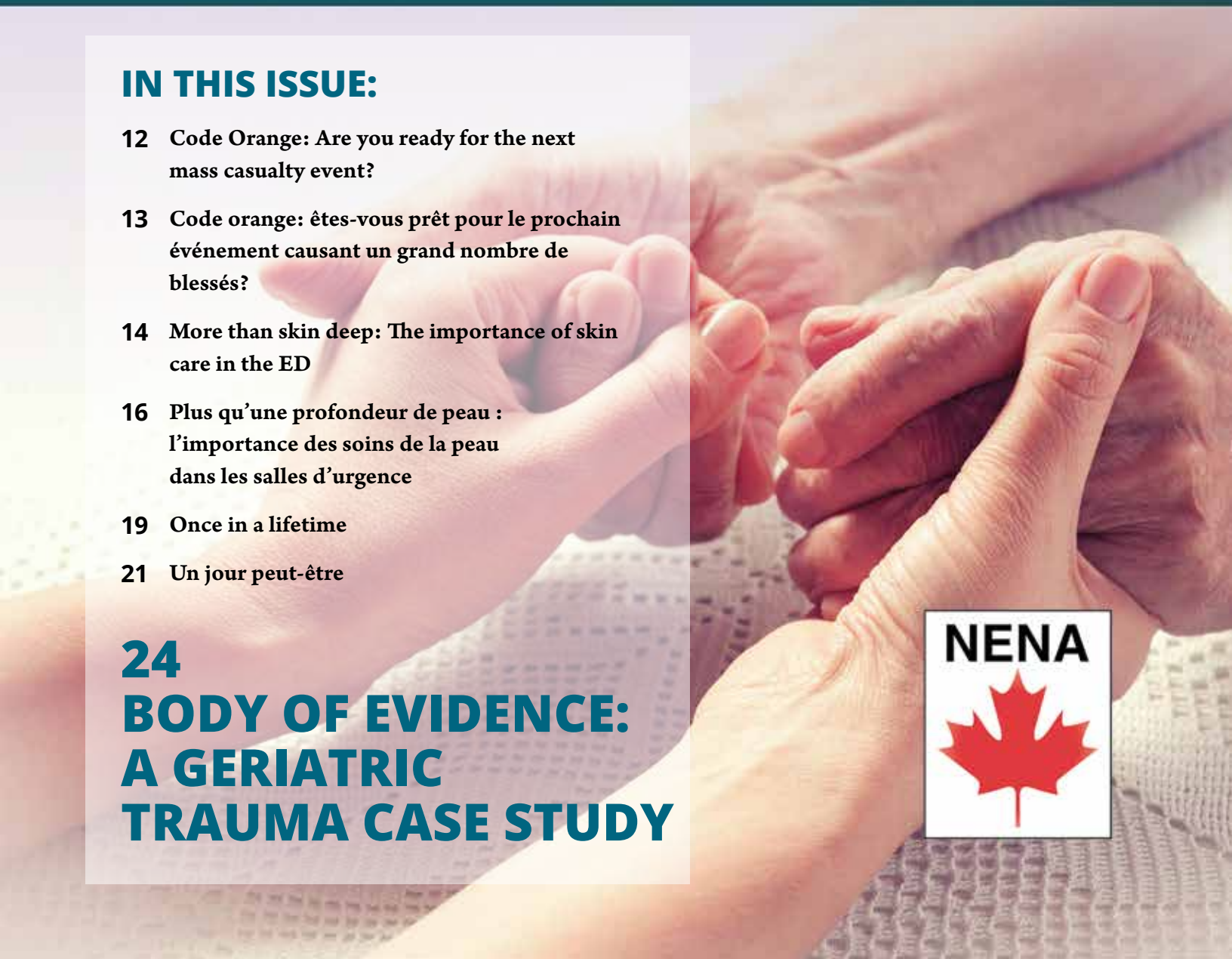

Guidelines for submission

Editorial Policy

1. **Canadian Journal of Emergency Nursing** welcomes the submission of clinical and research articles, case studies, and book reviews relating to the field of emergency nursing.

2. Statements or opinions expressed in the articles and communications are those of the authors and not necessarily those of the editor, publisher or NENA. The foregoing disclaim any responsibility or liability for such material and do not guarantee, warrant or endorse a product or service advertised in this publication, neither do they guarantee any claim made by the manufacturer of such product or service.

3. Authors are encouraged to have their articles read by others for style and content before submission.

Preparation of manuscripts

1. The original copy of manuscripts and supporting material should be submitted to the **Canadian Journal of Emergency Nursing** editor. The author should retain one complete copy.

2. Manuscripts must be typed, double-spaced (including references), layout on 8½″ × 11″ paper with standard margins. Manuscripts must be submitted in Word or Word Perfect and sent electronically to the communications officer at **communicationofficer@nena.ca**.

3. Author's name(s) and province of origin, a high-resolution photo and a brief biographical sketch must be included.

4. Clinical articles should be limited to six pages unless prior arrangements have been made.

5. Direct quotations, tables and illustrations that have appeared in copyrighted material must be accompanied by written permission for their use from the copyright owner, and original author and complete source information cited. Plagiarized material will be rejected without explanation.

6. Photographs of identifiable persons, whether patients or staff, must be accompanied by signed releases, such as the following: "I hereby give (author's name) authorization to use the photograph of (subject's name) in the **Canadian Journal of Emergency Nursing.**"

Please submit articles to:
Stephanie Carlson, CJEN Editor,
email: **communicationofficer@nena.ca**

Please include a brief biography and recent photo of the author.

Deadline dates:
January 31 and September 8

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National Emergency Nurses' Association, P.O. Box 365, Chilliwack, B.C. V2P 6J4

President's message

It is hard for me to think that I am ending my term as president, and in only a few short months will be in the position of past president. At first I thought "wholly cow"! Four years will go slowly and I am not sure I can do this. Yet, here I find myself at the end of the first three years of the term and my last official message for the journal.

I would like to take this time to thank the leaders who preceded me and to celebrate our association. I also want to recognize all the members who have dedicated themselves to NENA, their provincial groups and to all members past and present. Without your leadership and dedication, NENA would not be where it is today. I would like to express my gratitude for all your hard work and accomplishments.

As a member of NENA, I ask the question… What do I value about being a NENA member?

For myself, I like the fact that we have a *Canadian Journal of Emergency Nursing*. It is through the journal that we have the opportunity to share new knowledge and innovations. I encourage our members to submit an article, be published, and share your ideas with your colleagues.

As NENA members, we enjoy discount conference and course fees. This is such a help as we find that our employers are increasingly unable to fund these wonderful learning opportunities. At your national conferences (please join us for the 2015 Edmonton conference!), you have multiple opportunities to network and delve into some of the issues that impact our EDs. The chair of each conference responds to ideas and suggestions from all our membership to provide educational sessions that are practical and interactive. The overarching goal is to give participants an opportunity to develop concrete strategies to take back to their own organizations.

The more places I visit and the more emergency nurses that I meet, the more I begin to understand the similarities in emergency nursing practice whether you are in Canada, United States, Holland, Australia or any other country. As the NENA President I sat on the International Council for ENA and each time I spoke with nurses from other countries I found our practices shared more commonalities than reflected differences. Overcrowding, violence in the workplace, workload tools, and retention of specially trained nurses were frequently topics of conversation. These very issues are raised by NENA members as being important to them. NENA is developing strategies with other stakeholders to reduce our volumes and to seek strategies that will help increase our efficiency while simultaneously enabling us to deliver safe and effective care.

Your Board and Presidential Council are dedicated to formulating a strategic plan for the future of NENA and all emergency nurses of Canada. Each of us brings a unique set of skills and experiences. By sharing ideas, successes, and lessons learned, we become better ED nurses. NENA takes responsibility for supporting you and advocating for ED nurses across Canada. We look for ways in which to serve you better and welcome all feedback and questions.

As my term winds down, I would like to take this opportunity to thank you, the members of NENA. You are the reason we exist today. We need to combine our collective wisdom, experience and vast knowledge and put it to good use.

Janet Calnan,
NENA President

Postings under the Documents tab on the new NENA website

The following Position Statements were revised by the Presidential Council and posted on the new NENA website during the fall meetings in November of 2014:

- Care of the Non-Fatal Strangulation Victim
- End-of-Life Care for Potential Organ and/or Tissue Donors
- Care of the Mental Health/Behavioural Health Patient in the Emergency Department
- Procedural Sedation of Adults and Children in the Emergency Department
- Family Violence
- Role and Use of the Non-RN Care Provider in the Emergency Department
- Infection Control/Implementation of Routine Practices
- Family / Primary Support Unit During Invasive Procedures and Resuscitation
- Role of the Triage Nurse
- Minimum Requirements for an Emergency Department Nurse
- Emergency Department Overcrowding

Organizational Policies

- Bylaws (In accordance with the Not-for-profit Canada Corporations Act)

Standards and Practices

- NENA Core Competencies
- NENA Conference Toronto April 2014 Presentations

Bursaries and Awards

- Memorial Bursaries
- Awards of Excellence
- Bursary Application

Forms

- Nomination Form
- Nominations form for Board Positions

Coming Soon April 2015

- Observation Units in the Emergency Department
- NENA Standards of Practice
- Admitted Patients in the Emergency Department

Message de la Présidente

C'est difficile pour moi de penser que mon mandat comme présidente se termine, et dans seulement quelques mois, je serai dans la position d'ex-présidente. Au début, je m'étais dit « Oh mon Dieu! Quatre ans, ce sera long et je ne suis pas certaine que je pourrai réussir ». Alors me voici à la toute fin des trois premières années de mon mandat et mon dernier message officiel pour le journal.

J'aimerais prendre ce moment pour remercier les dirigeants qui m'ont précédé et pour célébrer notre association. J'aimerais aussi reconnaître tous les membres qui se sont dévoués à la NENA, leurs groupes provinciaux et à tous les membres présents et passés. Sans votre leadership et votre dévouement, la NENA ne serait pas là où elle est aujourd'hui. J'aimerais exprimer ma gratitude pour votre travail et vos réalisations.

Comme membre de la NENA, je pose la question… Qu'est-ce que j'apprécie à propos du fait d'être membre de la NENA?

Pour ma part, j'aime le fait que nous ayons un *Journal canadien de soins infirmiers en traumatologie*. C'est par le Journal que nous avons l'opportunité de partager nos nouvelles connaissances et les innovations. J'encourage nos membres à publier un article, soyez publié et partagez vos idées avec vos collègues.

En tant que membres de la NENA, nous apprécions les réductions de coûts des conférences et des cours. C'est une grande aide puisque nous constatons que nos employeurs sont de plus en plus incapables de financer ces merveilleuses opportunités d'apprentissage. À votre Conférences Nationales (s'il vous plaît, joignez-vous à nous pour la conférence 2015 à Edmonton!), vous avez de nombreuses opportunités de faire du réseautage de creuser dans certaines des problématiques qui ont un impact sur nos salles d'urgence. Le président de chaque conférence répond aux idées et suggestions de tous nos membres afin de procurer des séances éducationnelles qui sont pratiques et interactives. L'objectif primordial est de donner aux participants l'occasion de développer des stratégies concrètes et de les ramener à leurs propres organisations.

Plus je visite des endroits et plus je rencontre des infirmières en traumatologie, plus je commence à comprendre les similitudes dans la pratique des soins infirmiers en traumatologie que vous soyez au Canada, aux États-Unis, en Hollande, en Australie ou tout autre pays. En tant que présidente de la NENA, j'ai participé au Conseil International pour l'ENA et chaque fois que j'ai parlé à des infirmières originaires d'autres pays, j'ai découvert que nous partagions plus de points communs que de différences dans nos pratiques. La surpopulation, la violence en milieu de travail, les outils de gestion de la charge de travail et la rétention des infirmières spécialement formées étaient souvent des sujets de conversation. Ces questions sont soulevées par les membres de la NENA comme étant importantes pour eux. La NENA élabore des stratégies avec d'autres parties prenantes afin de réduire nos volumes et pour chercher des stratégies qui aideront à augmenter notre efficacité tout en nous permettant de fournir simultanément des soins sûrs et efficaces.

Votre Conseil et votre Conseil Présidentiel sont dévoués à formuler un plan stratégique pour le futur de la NENA et toutes les infirmières en traumatologie du Canada. Chacun de nous apporte des compétences et des expériences uniques. En partageant les idées, les succès et les leçons apprises, nous devenons de meilleures infirmières en traumatologie. La NENA prend la responsabilité de vous soutenir et de défendre les infirmières en traumatologie partout au Canada. Nous cherchons des façons de mieux vous servir et vos commentaires sont toujours les bienvenus.

Puisque mon mandat tire à sa fin, j'aimerais prendre l'occasion qui m'est offerte pour vous remercier, membres de la NENA. Vous êtes la raison de notre existence. Nous devons combiner notre sagesse, notre expérience et notre vaste connaissance collective et en faire bon usage.

Janet Calnan, Présidente de la NENA

Communications Officer's Report

The old adage, *the more things change, the more they stay the same*, is just as true today as it was when Jean-Baptiste Alphonse Karr said it in 1849. You will see more changes in this edition of CJEN as we have a portion of the journal translated into French. The NENA Board believes this will serve our diverse membership well as NENA and its affiliates try to respond to the needs of all its members.

Despite this change, we remain eager for submissions from our members and welcome any articles, essays, or other contributions that promote the discipline of emergency nursing. Deadline for the fall edition is September 10 and we plan to adhere to it strictly.

One thing that has not remained the same is the website. It has now been almost a full year since we launched the new NENA website and most of hitches which were anticipated have been worked out. We believe this new website brings a fresher presence to the Internet and is easier for our members and for non-members to navigate. Behind the scenes, it has required a lot of learning for everyone who is involved and hats off to all of the Provincial Directors and Membership persons and the Board and course people who have stepped up and worked to become adept in performing their required duties with the website.

The volume of work associated with the website has increased considerably and the NENA Board has decided to divide the work now done by the Communications Officer into two positions: Journal Editor and Webmaster. This change will occur with the changes in offices in on July 1.

Thank you to everyone who has patiently endured problems and glitches associated with the switch-over to the new site. The emails and phone calls reporting "issues" have been gracious and kind, likely belying a quiet frustration with renewals, finding documents, and linking with individuals through the site.

Respectfully Submitted, Stephanie Carlson

National Course Administration Committee (NCAC) TNCC/ENPC/CATN/CTAS Updates

By Margaret Dymond, Director of Training, NENA Board of Directors

Reminder NCAC email: courses@nena.ca

The last six months have been a period of transition for the NENA BOD. My new role as Director of Training involves strategic planning, particularly reconciliation of TNCC/ENPC course fees and financial planning for the organization.

All course directors must submit the applicable course fees within 30 days of the course and Form C to the:
NENA Treasurer
National Emergency Nurses Association
P.O. Box 365
Chilliwack, BC V2P 6J4

The course fee structure has not changed since 2012. If you require information regarding courses, please contact your NCAC rep at **courses@nena.ca.** If you have cancelled your course, please notify ENA at **courseops@ena.org** and the NENA treasurer at **treasurer@nena.ca**.

TNCC and ENPC contracts with ENA are currently under review. Future changes will be communicated to course directors and instructors later in the Spring via the NCAC group.

Chair NCAC – Ann Hogan

NENA membership required for all TNCC/ENPC/CTAS instructors

All instructors must have current NENA membership in order to teach courses. Instructors can go to the NENA website to renew. If your NENA membership has lapsed, instructors cannot teach courses until their membership is renewed. If course directors are unsure if their instructors are current members, they can contact their NCAC rep for their province.

Course for Advanced Trauma Nursing (CATN)
CATN is now on line. For more information email **elearning@ena.org**

Important information for TNCC Course Directors—TNCC 7th edition
TNCC Test A has been compromised in a manner that could affect the outcomes of courses. Two replacement tests, E & F, have been developed and posted in the Course Directors Only section of the ENA website, under TNCC 7th edition, Provider course. Therefore, effective immediately, please:

1. Destroy any remaining copies or electronic files of TNCC Tests A and C.
2. Begin using Test E or Test B as your primary test.
3. When a student qualifies to be retested, use a completely different test. For example, if Test B was the primary test, use Test E or Test F as the retesting test.

Please be aware that on the current TNCC scantron sheets there is no provision for tests E and F. Write the letter of the test used below the TNCC test form D on the scantron sheet. New scantron sheets will be printed and made available soon.

Please ensure the security of the testing process, which is intended ultimately to protect the safety of patients. All course directors must ensure students have no access to cell phones or other electronic devices or course manuals during the testing process. A monitoring instructor must be present in the testing room at all times.

French translation 4th Edition ENPC and 7th Edition TNCC
All instructors should be aware you are not permitted to translate any course materials into French. This includes course slides, exams, course materials and manuals.

Course fee payments by Interac e-Transfer for NENA fees
Effective January 1, 2015, the National Emergency Nurses Association will accept course fee payments by Interac e-Transfer. The Interac e-Transfer recipient email address to be used is **financeadmin@nena.ca**

When making the payment and sending your password, please ensure that you:

a. Attach a copy of a Form C or;
b. Include the following course detail for each course being paid for in the message field of the Interac e-Transfer details:
   - Course number
   - Number of participants
   - Location of the course.

The Form C or course detail is required by NENA Finance & Administration to ensure that the payment is allocated to the appropriate accounts receivable.

If you have any questions, please do not hesitate to contact **financeadmin@nena.ca.**

Join us on Twitter @NCAC3

NCAC contact information

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NCAC generic email: courses@nena.ca
CTAS generic email: ctas@nena.ca

Comité national d'administration de cours (CNAC) Mise à jour TNCC/ENPC/CATN/CTAS

Par Margaret Dymond, Directeur de la formation, Conseil d'administration NENA

Courriel de rappel CNAC : courses@nena.ca

Les six derniers mois ont été une période de transition pour le CA NENA. Mon nouveau rôle en tant que Directrice de la formation implique la planification stratégique en particulier la réconciliation des frais de cours TNCC/ENPC et de la planification financière de l'organisation.

Tous les directeurs de cours doivent soumettre les frais de cours applicables dans un délai de 30 jours après le cours et le formulaire C à :
Trésorier NENA
Association nationale des infirmières en traumatologie
Boîte postale 365
Chilliwack, BC V2P 6J4

La structure des frais de cours n'a pas changé depuis 2012. Si vous avez besoin d'information concernant les cours, s'il vous plaît communiquez avec votre représentant CNAC à **courses@nena.ca.** Si vous avez annulé votre cours, s'il vous plaît avisez l'ENA à **courseops@ena.org** et le trésorier NENA à **treasurer@nena.ca.**

Les contrats entre TNCC et ENPC et l'ENA sont réactuellement en cours de révision. Les modifications futures seront communiquées aux directeurs de cours et aux instructeurs plus tard au printemps via le groupe CNAC.

Présidente CNAC – Ann Hogan

Tous les instructeurs TNCC/ENPC/CTAS doivent être membres NENA

Tous les instructeurs doivent être membres en règle NENA pour pouvoir donner les cours. Les instructeurs peuvent aller sur le site Web de la NENA pour renouveler leur adhésion. Si vous adhésion NENA est échue, les instructeurs ne peuvent pas enseigner les cours jusqu'à ce que leur adhésion soit renouvelée. Si les directeurs de cours ne sont pas certains si leurs instructeurs sont membres, ils peuvent communiquer avec leur représentant CNAC de leur province.

Cours pour les soins infirmiers en traumatologie avancé (CATN)

CSITA est désormais en ligne. Pour plus d'information, écrivez à **elearning@ena.org**

Information importante pour les directeurs de cours TNCC – TNCC 7e édition

Les examens A TNCC ont été compromis d'une manière qui pourrait affecter les résultats des cours. Deux examens de remplacement, E & F, ont été développés et publiés dans la section Directeur seulement du site Web de l'ENA, sous TNCC 7e édition, fournisseur de cours. Donc, en vigueur immédiatement, s'il vous plaît:

1. Détruisez les copies restantes ou les fichiers électroniques des examens TNC A & C. Commencez à utiliser l'examen E ou l'examen B comme examen principal.
2. Lorsqu'un étudiant se qualifie pour subir à nouveau l'examen, utilisez un examen entièrement différent. Par exemple, si l'examen B était l'examen principal, utilisez l'examen E ou l'examen F comme second examen.
3. S'il vous plaît, prenez conscience que sur les feuilles TNCC scantron **actuelles** il n'y a pas de provision pour les examens E et F. Écrivez la lettre de l'examen utilisé sous le formulaire D d'examen TNCC sur la feuille scantron. De nouvelles feuilles scantron seront imprimées et disponibles bientôt.

S'il vous plaît, veuillez assurer la sécurité du processus des examens qui est destiné ultimement à protéger la sécurité des patients. Tous les directeurs de cours doivent s'assurer que les étudiants n'ont pas accès à des téléphones cellulaires ou autres appareils électroniques ou manuels de cours durant l'examen. Un instructeur-surveillant doit être présent dans la pièce où est fait l'examen en tout temps.

Traduction française 4e édition ENPC et 7e édition TNCC

Tous les instructeurs doivent savoir que vous n'êtes pas autorisés à traduire le matériel de cours en français. Cela comprend les présentations, les examens, le matériel de cours et les manuels.

Paiements des frais de cours par e-Transfer Interac pour les coûts NENA

En vigueur le 1er janvier 2015, l'Association nationale des infirmières en traumatologie acceptera le paiement des frais de cours par e-Transfer Interac

L'adresse courriel du destinataire e-Transfer à utiliser est le **financeadmin@nena.ca**

Lors du paiement et de l'envoi de votre mot de passe, assurez-vous s'il vous plaît de :

a. Attacher une copie du formulaire C; ou
b. Inclure les détails de cours suivants pour chaque cours payé dans la zone du message pour les détails entourant le e-Transfer Interac:
   - Numéro du cours
   - Nombre de participants
   - Emplacement du cours.

Le formulaire C ou les détails du cours sont requis par les Finances & l'Administration NENA afin d'assurer que le paiement est alloué aux comptes recevables appropriés.

Si vous avez des questions, s'il vous plaît n'hésitez pas à communiquer avec **financeadmin@nena.ca**.

Suivez-nous sur Twitter @NCAC3

Contact CNAC

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Ann.Hogan@horizonnb.ca
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CTAS courriel général: ctas@nena.ca

Bouquets (and Booboos)

- A huge thank you to **Dawn Paterson** for her faithful service as Secretary of NENA. She has served during this particularly stressful and difficult transition to the new governance style without complaint, greeting each hurdle with a smile and a soft word. Thanks a million, Dawn!
- Congratulations to **Alexis Mageau,** RN, BNSc, MN, Clinical Nurse Specialist for the Calgary Zone Emergency Program, and flight nurse for STARS, who was awarded the 2015 CARNA Award for Excellence in Clinical Practice.
- Thank you to **Alison Duncan** of Saskatchewan for your years of service as provincial president. SENG is looking for a talented nurse to fill her shoes.
- **Oops! Post to NENA Website Should Have Read…** "Margaret Smith was an Emergency Pediatric Nurse whose passion was the children to whom we give care on a daily basis and Marg was instrumental in developing standards of care for the pediatric patient. In honour of Marg's memory, NENA will award the Margaret Smith Memorial Bursary each spring in the amount of $500 to a NENA member who also embraces continuing education in the area of pediatrics, certification in pediatrics, or courses with a pediatric background" …Instead of "NENA will award the Margaret Smith Memorial Bursary each spring in the amount of $500 to a NENA member who also embraces continuing education in the area of pediatrics, certification in pediatrics, or curses with a pediatric background."
- Congratulations to **Valerie Eden** of Nova Scotia for completing a stellar career in nursing and in emergency nursing. Val is a long-time NENA member, dating back to the early 80s and has served as Nova Scotia Provincial Director, NENA President, and Communication Officer. The NENA board was proud to recognize her years of service by giving her a lifetime NENA membership. Best wishes on your retirement, Val!
- The NENA Board and Advisory Council voted at the fall meetings to honour the late Debbie Cotton by creating a bursary in her name. The **Debbie Cotton Memorial Bursary** in the annual amount of $500.00 is open to qualifying NENA members and will be awarded at the spring AGM each year.
- On February 9, 2015, all NBENA members were entered into a draw for an all-expenses-paid trip to the NENA Conference in Edmonton, Alberta! The winner was **Jacqueline Fraser**, emergency department research nurse from the Saint John Regional Hospital!

  Jackie Fraser graduated from the Saint John School of Nursing in 1991. Her first job was in the emergency department at the Carleton Memorial Hospital. She states, "I was so lucky to start my career in such a wonderful department. They opened their arms and hearts, but the most wonderful gift was how eager they were to pass along their pearls of wisdom…We were little sponges; so much learning." Jackie proceeded to further her education with the Critical Care Course, obtained her Bachelor of Nursing Degree from UNB, and started her interest in Research.

  After 15 years, Jackie made her way to the city of Saint John and found herself in cardiology research. Luckily life threw her a curve ball (a bouncing baby boy) and she resumed her emergency nursing career at the Saint John Regional Hospital. "I remember being so nervous when I first started working in this department…an urban, academic centre, but that was shortly alleviated due to my sound rural nursing experience. I still had lots to learn though… I think that is why I have always loved emergency nursing; every day is different—you can learn something new every day, and have a few laughs!"

  Jackie is currently the Research Coordinator at the Saint John Regional Hospital and has been instrumental, along with Dr. Paul Atkinson, in developing the research program over the past four years. "It important to do research that can examine and hopefully improve care and processes in our department."
- Congratulations to BC forensic nurses **Tara Wilkie, Aimee Falkenberg,** and **Larena Dodd** from Surrey Memorial Hospital, Surrey, BC Forensic Nursing Services received the Soroptimist International Ruby Award on February 27, 2015, for its development of the first Canadian module for education of health care providers regarding recognition and care of the human trafficked person. The award recognizes women who work every day in either her profession or volunteer to help other women. It was a fabulous night and their professionalism, dignity and humanity shone!
- Kudos to the team of **ENPC Course Directors and Instructors** in BC, and BC ENPC coordinator, **Andree Lineker.** They orchestrated many changes in the process, requiring much time to streamline financial activities, during the transition to the new NENA website. Great job!

News from the provinces

British Columbia

We have 190 paid members with many new members signing on. We have shut down our ENABC website and all information is now posted on the BC page of NENA.

BC is sponsoring five nurses for Edmonton! It's not too late to register, so let's all promote the conference and get the numbers as high as we can.

Flu season has come and gone in BC, as well as Ebola. Many emergency nurses received training in donning and doffing, and the province has developed a clear process to stream patients to several sites only. The training strained resources in many EDs.

TNCC/ENPC/CAMAN/ACLS/PALs and CTAS(including Instructor Courses) continue full steam in many areas of the province. PRN education is again ahead of the curve and is offering a new course, "Advanced Care in Emergency Departments, ACED" with the first course happening in beautiful North Vancouver at Lions Gate Hospital, on April 25–26.

WEDOC is supporting a triage conference in Vancouver on April 15 with a group of talented speakers: **http://ubccpd.ca/course/wedoc-2015.**

Many thanks to the Edmonton emergency nurses for inspiring us to put a workshop on in Vancouver this year. There is a small discount for NENA members.

Thank you to the Association of Registered Nurses of BC for donating the webinar line for "Ketamine for Acute Agitation", by Dr. Gary Andolfatto on March 6, 2015. Thank you to the BC, Alberta, Manitoba and Newfoundland Emergency Nurses for logging in. We will continue to promote speakers through this technology and engage nurses across the province and Country.

Bouquets of flowers to our ED nurses who continue to provide excellent care in challenging times. A beautiful scented bouquet of spring flowers to our Editor Stephanie Carlson, who prods, pokes and inspires NENA members to be the best!

Sherry Stackhouse
BC Director

Alberta

Hello from Alberta. Our membership continues to do well—our recent count is 329 members.

In October we had our AGM with our 'Meet in the Middle' education day in Red Deer. In my first term as president for Alberta, organizing my first conference, it was a huge success with 143 participants attending from all over the province. Thanks to my provincial council for all their help in organizing our well attended event.

Alberta continues to offer many TNCC and ENPC courses throughout the province with waiting lists to attend the courses.

May is approaching very quickly as the finishing touches are being completed on the organization of the National Conference in Edmonton, April 29–May 3, 2015. I feel our committee has put together speakers and a location that will make 2015, 'Prepare for the Unexpected,' a conference of which to be proud.

Overcrowding with long waits and departments full of admissions continue to be a problem all over the province. These waits are creating frustrations for patients and for our staff alike.

On a sad note, Edmonton said goodbye to one of our own first responders this past January. Unable to deal with his depression from work-related stress, a beloved paramedic took his own life. We do not want his death to be in vain. It is our hope that his death will help deal with the stigma of depression, and that we need to be there for each other and help open up the lines of communication. My own department does not have a CISM program any longer, but hopefully his death will get the ball rolling again.

I look forward to meeting many of you from across the country in Edmonton at the NENA conference. See you in May.

Thank you
Shelley Pidruchney
Alberta Provincial Director

Manitoba

It is difficult to think of spring, as I write this on a cold February day for the spring edition of *CJEN*. Yet, in a few short months, spring will be upon us in the prairies and new life is breathed into Manitobans. Emergency nurses across the province continue their dedicated work making a difference for patients 24/7 no matter the weather or the season.

The much-awaited Sinclair Inquest recommendations have been made public, with 63 recommendations that impact not only the emergency department, but also home care, primary care facilities, and the Winnipeg Regional Health Authority to name a few. These recommendations are being examined by emergency directors, as well as Manitoba Nurses Union representatives to determine implementation strategies for the recommendations specific to emergency. There are many recommendations related to triage and emergency department waiting room design. Emergency department flow, increased Homecare hours, staffing levels for the EDs, and overcapacity protocols to name a few. These recommendations, once examined and implemented, will surely have great impact on emergency department processes throughout the province.

Detect, Protect, and Respond: Ebola preparedness has been the primary focus since the fall of 2014 within the Winnipeg Regional Health Authority, as it is within most of North America. A 'no-touch approach' with travel screening questions occurring at triage has now been implemented in all urban EDs in Manitoba. The focus in Winnipeg EDs has been screening patients from the point of contact in ED, PPE donning and doffing, and strategizing a plan to care for patients within the hospital. Planning has also been done with EMS for 911 calls and transport. Scientists who are associated with the Federal Virology Lab in Winnipeg have been travelling to affected countries in Africa. A specific unit at the Health Sciences Centre has been designated for potential Ebola patients should the need for quarantine arise. Many of the rural EDs have also implemented processes for handling potential Ebola Virus patients should they present to a rural ED.

A new Minister of Health, Sharon Blady, has been appointed in Manitoba, previously Minister of Healthy Living. Last October, five provincial Ministers resigned over 'grave concerns' about the Manitoba premier. They claimed that Premier Greg Selinger had not been listening to them "on some very serious issues". The NDP leadership campaign is now underway in Manitoba.

TNCC, ENPC and CTAS courses continue to run throughout the province. Recently a group of Manitoba TNCC instructors travelled to Whitehorse, Yukon, to provide two TNCC courses. TNCC and ENPC courses are scheduled throughout northern Manitoba in The Pas, Flin Flon, and Thompson for the remainder of 2015. TNCC is currently offered in all regions of Manitoba.

An EDNA information evening is currently being planned for early spring. Come out for an evening of fun and information on what's current in emergency. Stay tuned, Manitoba emergency nurses!

We are hoping to see many Manitoba emergency nurses travel to Edmonton this year for the NENA conference. Let's get a plane load together, Manitoba!

In the meantime, stay warm, prairie friends. Spring is around the corner.

Respectfully submitted,
Marie Grandmont, RN, BN, ENC(C)
Manitoba Director

Ontario (ENAO)

Hello to all emergency nurses across Canada from the Emergency Nurses Association of Ontario (ENAO). We are truly grateful for the kinship of our national colleagues to keep us warm throughout this apparently unending Canadian season that we call winter. Fortunately, we are all hardy Canadians!

ENAO is constantly striving to increase provincial/national membership while holding onto current members. With this in mind, the ENAO Board of Directors utilized due diligence in compiling a best–effort list of former, but no longer current members. An inquiry email was sent to all last-known addresses, asking them to share with us their personal reasons for non-membership. We also asked former members to suggest what would entice them to rejoin ENAO and NENA. The results will be reviewed at the upcoming ENAO spring 2015 BOD meeting.

The ENAO BOD sent a slightly different email inquiry to all current members. We asked them to share any and all ideas or suggestions for their professional organizations that they felt would better facilitate us meeting their needs, as members. After seeking this information from Ontario's members, we also challenged them directly with the age–old question: "What could you do for ENAO and NENA? Is it not time for you to become more active in your provincial and national associations?"

ENAO is extremely proud of our ever-expanding and very professional website (**www.enao.me**). ENAO's Webmaster, Mr. Motsi Valentine, ensures that educational events, opportunities and conferences throughout all of Ontario are posted as soon as any information becomes available. He also keeps the ENAO website calendar current for anyone (members, non-members, employers, the public, health care organizations, corporate sponsors) who investigates our website. The launch of the ENAO Facebook page is also attracting lots of interest.

While ENAO is faced with an ongoing vacant Communications Officer executive position, we remain committed to providing our members with a professional provincial journal twice each year. The ENAO President and Webmaster have joined forces to ensure that the *Journal of the Emergency Nurses Association of Ontario (JENAO)* continues to be a reality for our members. Our joint efforts to solicit journal articles and contributions, accompanied by the enthusiasm and ideas of our new publishing company, give us confidence in moving our publication forward, all for the benefit of our respected members.

Responsibly, the ENAO Board of Directors is currently reviewing and updating all of the Roles and Responsibilities within our association to ensure applicability for ENAO and its members in 2015 and beyond. Additional ENAO educational initiatives are in the planning stages for later this year—stay tuned!

Hopefully, by the time you read this in *CJEN*, we will all be enjoying spring in each of our Canadian provinces. Regardless, not only are we hardy Canadians, but we are emergency nurses!

Respectfully submitted,
Janice L. Spivey, RN, ENC(C), CEN
ENAO President

New Brunswick

New Brunswick has been hit with several major snow storms that have closed highways and left people stranded and unable to get to work. Many emergency nurses worked double shifts making sure patients received care… Know the work you do makes a difference! The dedication shown is indicative of how great emergency nurses are.

NBENA continues to struggle to build membership. Posters promoting NBENA have been distributed throughout the province. There has been communication via email to ERs, as well as via the NENA website informing of teleconference meeting times… Still we struggle.

New Brunswick has 18 emergency departments, the majority of which are rural. The issues are the same throughout the province and Canada—admitted patients waiting for beds, emergency nurses having to care for the acute patient that comes through the door, as well as continue the care for the admitted patient. The waiting rooms are full! It is my hope that through networking with members of NENA I can have discussions regarding these issues and an improvement to the present situation might be found.

NBENA promotes education and we encourage our nurses to challenge themselves to obtain their Emergency Nursing Certification.

TNCC, ENPC, and CTAS are offered regularly at several institutions throughout the province.

Simulation! In southern NB there has been collaboration between MDs, RTs and nurse educators to provide education to nurses and MDs in our rural hospitals through case-based simulation. It has been hugely successful in improving skills, communication and processes. The level one trauma centre in southern NB has biweekly case-based in situ simulation.

Again working collaboratively with the nurses, RTs, and MDs to improve team skills and communication. Each case-based simulation is followed by debriefing where issues are addressed, decisions are made to change or improve processes.

Emergency nurses having been working collaboratively with the NB Ebola task force and Infection Prevention & Control to develop and implement the donning and doffing process for the potential Ebola patient. This standardized approach will be used at all sites throughout NB. Education is ongoing with the front-line nurses to ensure competency. Our goal is to ensure our emergency nurses are safe while providing the best care possible to these patients. Weekly simulations are being held at the Saint John Regional Hospital to identify processes for all departments that would be involved in the care of the Ebola patient. These processes are valuable and transferable in the event of any infectious diseases.

NBENA is sponsoring an ER nurse to attend the 2015 NENA conference.

Debra Pitts, RNBN, ENC(C)
NB Director

Nova Scotia

Warm greetings from Nova Scotia! It has been a very cold and snowy winter here on the East Coast and we are glad to see the spring edition of *CJEN* coming out, which means summer won't be far behind!

We have survived the December 2014 deadline for the Provincial ED standards. Although there is still much work being done, there have been some great improvements in emergency care here in Nova Scotia as a result. One example of this is education for both staff and physicians, which is now mandatory and, therefore, staff are better supported to attend courses such as ACLS, PALS, ENPC, TNCC and CTAS. Emergency departments and the Nova Scotia Department of Health and Wellness continue to work together to address issues and concerns around such things as access and flow, seniors care, mental health and addictions, as well as policies around provincial care directives and capacity protocols. Despite this great work, emergency departments around the province have seen a spike in visits and boarded patients since the New Year, which has certainly challenged the system.

The provincial health care system itself is undergoing massive change in Nova Scotia. Currently there are nine District Health Authorities plus the IWK Health Centre. As of April 1, 2015, those nine district health authorities will be merged into one health authority for the province plus the IWK Health Centre. With any change comes uncertainty, and the future of this new health care system remains to be seen. Hopefully it will bring more opportunity than challenge.

Speaking of change, it has been a huge privilege to represent Nova Scotia at NENA over the past few years. However, it is time for some fresh new energy in the role. Mary Spinney will be taking over as the Nova Scotia provincial director after the spring NENA conference. Mary has been active with NSENA for the past few years and I have every confidence she will bring some fresh perspective to the role. Through NENA I have met some of the greatest emergency nurses in the country. The people I have worked with on the NENA Board are true caring professionals who are passionate about emergency nursing in Canada and I thank them for the opportunity to work with them over the past few years. I will continue to be a strong supporter of NENA and encourage all emergency nurses across Canada who are not already members to become members and help shape emergency nursing in Canada. As the saying goes: Be the change you want to see.

Respectfully submitted,
Michelle Tipert, RN, ENC(C)
NENA Nova Scotia Provincial Director

Prince Edward Island

Hello to all nurses across Canada from PEI. It has been a challenging winter so far. Special thanks to all the dedicated emergency nurses who have been facing many challenges and changes over the past few months. I am looking forward to the conference in Edmonton. I know the committee has been working very hard and we thank you in advance. It has been a slow winter and activity in our PEIENA group is looking forward to a spring rejuvenation. Membership remains consistent at 23 over the year. Our members are offered priority to workshops at a reduced rate. The *CJEN* and conference pamphlets have been circulated to the three main hospitals with hopes to generate more interest.

PEIENA did have a successful workshop in September. The forensic workshop was sponsored by our group and was very well attended. Health PEI has asked that the workshop be repeated. Posters were made and NENA pins were given out to help spark an interest in becoming a PEIENA member. TNCC will take place next the end of April. We have six qualified instructors teaching the course at present. CTAS continues to be offered each month with six instructors. ENPC is not available in PEI at present. Our group now has enough funds to educate two RNs to start teaching ENPC and two individuals have committed to do so.

We continue to offer support for any education members wish to attend. Members have been reminded about the national bursaries and PEI supports a bursary (Barb Burns Bursary) with the deadline on September 15. The criteria for the bursary will be posted on the website. Certification is also supported and we wish luck to all those writing or renewing.

I believe our emergency departments struggle with the same issues as others across the country. Overcrowding, mental health patients, addictions patients, staff crisis, long wait times, and abuse. Staff has been working together to try to cope with these struggles. Model of care has started in our emergency departments and we will soon find out how it affects each staff discipline.

Special thanks to all our educators for TNCC and CTAS—you continue to do a great job keeping all our emergency nurses certified/well prepared for working in the ED.

Looking forward to seeing everyone at the spring conference.

Submitted by
Sharon Hay, RN, BN, ENC(C)
PEIENA Provincial Director

Code Orange: Are you ready for the next mass casualty event?

By Sherry Stackhouse, BC Provincial Director

Is your department ready to handle the next mass casualty? Code Orange training has traditionally occurred with volunteer 'patients' and department staff and can be labour- and time-intensive to organize. Not all staff has the opportunity to participate during a single event.

Our department last held a mock event with 'patients' just prior to the Olympics in 2010. Thirty-five 'victims' were processed through our department in less than an hour. Time passed, staff turnover occurred, and we felt the need to revisit how to orient staff to the process.

In 2013, our department piloted a tabletop type exercise utilizing 'Lego' patients and all ED 'staff' that would be available on a given shift. Participants were assigned to different areas of the department such as Triage, Resus, Acute Care and First Aid. We reviewed the policy and materials required, i.e., vests and role cards.

Approximately 10 months ago we used this for our physician group and were able to put 17 through a mock scenario in two hours. The physician group was able to determine a new call-out process, and also confirm which physicians would care for existing ED patients, and how incoming patients would be cared for. We now have three MD champions in the department. Based on overall positive feedback we have held regular sessions.

What does the process look like?

Assemble the group in a room with a table.

Assign staff to different areas and don vests according to role.

Receive notification of 'event'

Decide to call an 'alert', versus a 'minor' or 'major', depending on department criteria.

Identify patients to be moved according to policy. Create 'teams' to receive incoming patients.

Triage patients into the care spaces. Continue to move patients out if possible. Involve all to lead in individual areas. Utilize access or flow staff. Communicate with wards to take patients, as appropriate. All of this is simulated by moving the characters on the department map.

Debrief, answer questions.

This process is easy to roll out, inexpensive, and can be replicated and modified easily. To date approximately 50 ED staff have gone through this process and the sessions are now held monthly. The scenario can readily be changed to incorporate chemical exposure versus trauma, and can be adjusted to any size department.

So, update your Code Orange Plan, organize a tabletop exercise, and practise! It will make you much better and will increase confidence with handling casualties that may overwhelm the department capacity.

Code orange: êtes-vous prêt pour le prochain événement causant un grand nombre de blessés?

par Sherry Stackhouse, BC Provincial Director

Votre département est-il prêt à gérer le prochain événement causant un grand nombre de blessés? La formation Code Orange a traditionnellement eu lieu avec des « patients » volontaires et du personnel du département et peut représenter et peut représenter beaucoup de temps et de travail à organiser. Ce n'est pas tout le personnel qui a l'opportunité de participer à un seul événement.

Notre département a tenu un événement simulé avec des « patients » tout juste avant les Jeux olympiques de 2010. 35 « victimes » ont été traitées dans notre département en moins d'une heure. Le temps a passé, le personnel a changé et nous pensions que nous devions revoir comment orienter notre personnel sur ce processus.

En 2013, notre département a piloté un exercice de simulation en utilisant des patients « Lego » et tout le personnel de l'urgence disponible sur un quart de travail donné. Les participants étaient assignés à des zones différentes du département comme le triage, la réanimation, les soins de courte durée et les premiers soins. Nous avons revu la politique et le matériel requis, c'est-à-dire les gilets et les cartes de rôle.

Il y a approximativement 10 mois, nous avons utilisé ceci pour notre groupe de médecins et nous avons pu en mettre 17 dans une simulation en 2 heures. Le groupe de médecins a été en mesure de déterminer un nouveau processus d'appel et confirme aussi quels médecins prendraient soin des patients existants de l'urgence et comment les nouveaux patients seraient pris en charge. Nous avons désormais 3 médecins champions dans le département. En raison des commentaires généralement positifs, nous avons tenu des sessions de façon régulière.

À quoi le processus ressemble-t-il?

Rassemblez le groupe dans une pièce avec une table.

Assignez le personnel à différentes zones et remettez-leur un gilet associé au rôle.

Recevez l'avis de « l'événement »

Décidez de déclarer une « alerte », « mineure » ou « majeure », selon les critères de votre département.

Identifiez les patients qui doivent être sortis selon la politique. Créez des « équipes » pour recevoir les patients.

Triez les patients vers des zones de soins. Si possible, continuez de sortir les patients. Impliquez tout le monde pour mener dans les zones individuelles. Utiliser le personnel d'accès. Communiquer avec les salles pour prendre des patients le cas échéant. Tout cela est simulé en déplaçant les personnages sur la carte du département.

Faites le bilan, répondez aux questions.

Ce processus est facile à mettre en place, peu coûteux et peut être facilement reproduit et modifié. À ce jour, environ 50 employés sont intervenus dans ce processus et les sessions sont désormais tenues tous les mois. Le scénario peut être modifié pour y incorporer une exposition à des produits chimiques vs des traumas, et peut être ajusté aux départements de n'importe quelle taille.

Alors, mettez à jour votre plan Code Orange, organisez un exercice de simulation et pratiquez! Cela vous rendra bien meilleurs et augmentera la confiance à gérer les situations qui peuvent dépasser la capacité du département.

More than skin deep: The importance of skin care in the ED

By Cathy Sendecki, BSN, RN, GNC(C)

Introduction

While the management of pressure ulcers has often not been well understood and, therefore, not a high priority for many health care professionals, there has been increasing support and emphasis on the prevention and management of this debilitating condition for some years. Wound care clinicians provide education, products have become more standardized, and pressure ulcer prevalence is tracked as a Nurse Sensitive Adverse Event (NSAE) by the Canadian Institute of Health Information. Some risk factors, such as pressure, have been studied quite extensively; knowledge of other contributing factors is developing as friction, shear, moisture and heat are studied. Older adults are at particular risk to develop skin breakdown, but the principles apply to a wider population. The prevalence of pressure ulcers in acute care settings was approximately 25% in one Canadian study (Woodbury & Houghton, 2004). The implications for patients in terms of pain and poor outcomes, as well as the financial aspects of prolonged length of stay, and ongoing care after discharge, are significant.

In the ED, other priorities often demand our attention, but the purpose of this article is to consider practical measures we can take in the ED to contribute to skin integrity and generally improved outcomes for our older adult patients. In my learning, I discovered it's not just about skin and pressure, but a review of some basics is a good place to start.

What

Our skin is our largest organ. Throughout our lives it fulfils important roles including thermoregulation, excretion of metabolic wastes, protection of underlying surfaces, maintenance of fluid and electrolyte balance, and sensing pain, touch, and pressure. The skin is composed of three layers, epidermis, dermis, and subcutaneous tissue. The epidermis serves as a barrier, preventing the loss of body fluids and protecting the body from the entry of pathogens. Epidermal cells develop in the lower cell layers and migrate to the surface of the skin. Over time, they die and are shed, being constantly replaced. The dermis contains blood and lymph vessels, nerves, sweat glands and oil glands, and is composed of collagen and elastin fibres, providing strength and elasticity, helping to prevent tearing and overstretching of the skin. The dermis binds water, determining skin turgor and elastic properties. Blood vessels in the dermis contribute to thermoregulation, and cutaneous nerves sense pressure, temperature, and pain. The epidermis has no blood supply of its own, relying on nourishment from the dermal layer, to which it is connected by papillae. The subcutaneous layer contains fat, which provides some protection from injuries and also contributes to temperature regulation.

Age-related changes

Age-related changes, environmental and lifestyle effects such as sun exposure or cigarette smoking, combine to produce changes seen in many older adults. With age, the rate of turnover of epidermal cells decreases. The water content and thickness of the dermis decrease, the connecting papillae retract, the junction between the dermis and epidermis becomes flattened, and the transfer of nutrients between dermis and epidermis slows. The collagen and elastin fibres become weaker. The blood vessels of the dermis become more fragile.

All these changes increase the susceptibility of older adults to skin disorders such as skin tears, pressure ulcers, stasis dermatitis. The flattened dermal-epidermal junction results in less resistance to shearing forces; collagen changes cause skin to be less resilient and more susceptible to damage from abrasive or tearing forces. Blister formation is more likely. The regeneration of healthy skin takes twice as long for an 80-year-old person as it does in a 30 year old. This is not noticeable in intact skin, but has implications for wound healing, with increased risk of secondary infection.

Other factors

Medications, for example steroids, may increase the fragility of skin; anticoagulants exacerbate subcutaneous bleeding, which occurs more readily with age.

Chronic edema is a risk factor due to decreased oxygenation of tissues and inflammatory response, e.g., stasis dermatitis; minor trauma can lead to rapid breakdown of skin, and healing of injury or ulcers is slow.

The role of pressure

The very term "pressure ulcer" indicates one of the prime concerns relating to skin breakdown. It is interesting to note that in the mid-1970s the role of moisture was also identified, but was not studied so much until the 1990s. Continuing research into the role of pressure to skin breakdown reveals that it is not only pressure of skin against support surface that must be considered, for example, a given amount of pressure over a short time may be tolerated, whereas the same pressure for a longer duration will cause skin damage. Similarly, if the blood pressure falls, the same amount of pressure causes more damage, as circulation to the area is compromised. Deep tissue injury is suspected to begin in the muscle when a bony prominence exerts intolerable pressure on the adjacent tissues. This damage becomes apparent on the skin, but does not originate there.

To understand the mechanical forces contributing to tissue damage, we need to consider not only pressure, but also friction and shear. Friction is the force preventing movement between

two parallel surfaces. Shear refers to the movement of one layer of tissue against another. When a patient is supine on a stretcher and the head of the bed is elevated, the friction of skin against mattress and overlying linens holds the patient's skin against that surface; shear allows the skeletal structure to be pulled down by gravity. Tissue damage can occur to the skin as it slides along the bedding; internal tissues may be damaged as bones create pressure and movement within the body. Considering the decreased elasticity of aging skin, the fragility of the connecting blood vessels, and the decreased thickness of skin, it's easy to see that damage can occur quite readily. Excessive moisture on the skin contributes to increased friction when the patient moves against the support surface.

Moisture

Moisture can, itself, contribute to skin breakdown. Incontinence-associated dermatitis (IAD) manifests as skin redness in areas exposed to moisture and other irritants. Partial thickness open areas may develop. These can be differentiated from pressure wounds in that they are not generally located only over bony prominences—they may occur in skin folds. It is important to identify the etiology, as treatment is not the same as for pressure areas. When the skin has become damaged by IAD, it is more susceptible to injury from pressure, friction and shear.

The risk of developing IAD is increased in those with older skin, prolonged use of steroids, pain, altered skin oxygenation, fever, decreased mobility, or urinary incontinence. The factor most strongly associated with this condition being stool incontinence, particularly when caused by iatrogenic factors (e.g., C. Difficile, diarrhea or tube feeding).

Occlusive products have been found to increase the skin temperature, leading to perspiration. This can elevate the pH, increase water loss from the skin, and compromise barrier function.

Soaked incontinence products increase tissue interface pressure, even when used with a pressure-reducing or pressure-relieving surface.

Liquid stool is particularly damaging to the skin, possibly because of the concentration of digestive enzymes and bacteria that may proliferate in the environment of moisture, warmth, occlusion and damaged skin.

A note about intertriginous dermatitis—manifests as redness and maceration in skin folds, sometimes infected with candida or other organisms. As with other areas of skin damage due to heat, moisture, and chemical irritation, these areas benefit from gentle care with an appropriate skin cleanser, and avoidance of overheating. In the past, various topical treatments have been tried to achieve a dry environment, including gauze, linens such as towels, and paper towel. The current consensus is that these products, while initially absorbing excessive moisture, then provide an ongoing damp environment, so should be avoided.

Practice tips

- Include skin integrity in a comprehensive assessment, particularly in patients with decreased sensation or ability to communicate discomfort. Patients having suffered a stroke, spinal cord injury, diabetic or other neuropathy, or with decreased level of consciousness or dementia may be unable to identify painful areas. Skin assessment is included in '**E**xpose' and '**I**nspect posterior surfaces' during the secondary assessment. Patients with darkly pigmented skin may not meet the standard criteria for stage 1 pressure ulcers (redness). Observe for any change in colour of skin over bony prominences compared to surrounding skin, and attend to alterations in sensation, including pain to area.
- The Braden Scale is often recommended for assessing the risk of skin breakdown
- Limit use of occlusive incontinence products when patient must be moved for examinations (e.g., x-rays), or ambulated. Disposable underpads are preferable when the patient is in bed. If continence can be maintained by regular toileting, so much the better.
- Treatment of IAD and, indeed, prevention, includes cleansing perineal tissues of incontinent patients using a no-rinse cleanser of pH close to that of healthy skin, approximately 5.5. Do not rub or scrub, as friction can contribute to skin breakdown. After cleansing, apply moisturizer to restore moisture to the skin, and a barrier cream to protect the skin from stool, urine, or excessive moisture from perspiration.
- Especially with therapeutic support surfaces, avoid layers between patient and surface. Slings for lifting can contribute to areas of moisture under patients: remove when no longer needed.
- Ensure needed linens under patient are smooth and free of wrinkles to avoid localized areas of increased pressure.
- The frequency of position changes needed for each patient is an individual assessment; q 2 h repositioning is recommended initially, with changes in frequency made as necessary. Avoid positioning on open areas, but if this is unavoidable, limit time in such a position to one hour, and monitor wound for deterioration.
- Heel integrity is best managed by offloading pressure entirely. Offload pressure of heels on mattress with pillows, and support under knees to prevent hyperextension.

As with many aspects in caring for older adults, skin assessment and care interacts with many other systems. We have noted the risk from urinary incontinence to exacerbate skin damage. Conversely, wet occlusive products are also considered a risk factor for ascending urinary tract infections as skin organisms multiply.

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Plus qu'une profondeur de peau : l'importance des soins de la peau dans les salles d'urgence

Par Cathy Sendecki, BSN, RN, GNC(C)

Introduction

Alors que la gestion des ulcères de pression a souvent été mal comprise et donc une grande priorité pour plusieurs professionnels en soins de santé, il y a eu une augmentation du soutien et d'insistance sur la prévention et la gestion de cette maladie invalidante depuis quelques années. Les cliniciens de soins de plaies offrent une éducation, les produits sont devenus plus standardisés et la prévalence de l'ulcère de pression est suivie comme un effet indésirable en soins infirmiers (NSAE) par l'Institut canadien d'information sur la santé. Certains facteurs de risque, comme la pression, ont été largement étudiés; la connaissance d'autres facteurs contributifs se développe comme la friction, le cisaillement, l'humidité et la chaleur sont aussi étudiés. Les adultes plus âgés sont particulièrement à risque de développer une dégradation de la peau, mais les principes s'appliquent à une population plus large. La prévalence des ulcères de pression dans les établissements de soins de courte durée était d'environ 25 % dans une étude canadienne (Woodbury & Houghton, 2004). Les implications pour les patients sont significatives en terme de douleur et de mauvais résultats, ainsi que des aspects financiers ayant contribué à la prolongation du séjour et des soins continus après la sortie.

Dans une salle d'urgence, d'autres priorités demandent souvent notre attention, mais le but de cet article est de considérer les mesures pratiques que nous pouvons prendre dans la salle d'urgence afin de contribuer à l'intégrité de la peau et des résultats généralement améliorés pour nos patients plus âgés. Lors de mon apprentissage, j'ai découvert que ce n'est pas seulement une question de peau et de pression, mais une révision de certains éléments de base est un bon point de départ.

Quoi

Notre peau est notre plus grand organe. Durant notre vie, elle remplit des rôles importants comme la thermorégulation, l'excrétion de déchets métaboliques, la protection des couches inférieures, le maintien des liquides et de l'équilibre des électrolytes, la détection de la douleur, le toucher et la pression. La peau est faite de trois couches, l'épiderme, le derme et les tissus sous-cutanés. L'épiderme agit comme barrière, prévenant la perte de liquides corporels et protégeant le corps contre l'entrée d'agents pathogènes. Les cellules de l'épiderme se développent dans les couches inférieures et migrent vers la surface de la peau. Avec le temps, elles meurent rejetées, tout en étant constamment remplacées. Le derme contient le sang, les vaisseaux lymphatiques, les nerfs, les glandes sudoripares et les glandes sébacées, et il est composé de collagène et de fibres d'élastine, procurant force et élasticité, aidant à protéger la déchirure et l'étirement excessif de la peau. Le derme possède un réservoir d'eau, déterminant la turgescence et l'élasticité de la peau. Les vaisseaux sanguins dans le derme contribuent à la thermorégulation et les nerfs cutanés ressentent la pression, la température et la douleur. L'épiderme n'a pas son propre apport sanguin et s'appuie sur la couche dermique pour se nourrir, à laquelle elle est reliée par des papilles. La couche sous-cutanée contient des gras, qui procurent une certaine protection contre les blessures et qui contribue aussi à la régulation de la température.

Changements relatifs à l'âge

Les changements relatifs à l'âge, environnementaux et les effets reliés au style de vie comme l'exposition au soleil ou fumer la cigarette, se cumulent pour produire des changements chez plusieurs adultes plus âgés. Avec l'âge, le taux de remplacement de cellules épidermiques diminue. Le contenu en eau et l'épaisseur du derme diminuent, les papilles de liaison se rétractent, la jonction entre le derme et l'épiderme s'aplatit et le transfert de nutriments entre le derme et l'épiderme ralentit. Le collagène et les fibres élastines s'affaiblissent. Les vaisseaux sanguins dans le derme deviennent plus fragiles.

Tous ces changements augmentent le risque, pour les adultes plus âgés, de maladie de la peau comme des déchirures cutanées, des ulcères de pression et la dermatite de stase. La jonction aplatie entre le derme et l'épiderme mène à une plus faible résistance aux forces de cisaillement; les changements dans le collagène font en sorte que la peau est moins résiliente et plus susceptible aux dommages causés par les forces abrasives et les déchirures. La formation de cloques est plus probable. La régénération d'une peau saine prend deux fois plus de temps pour une personne âgée de 80 ans que celle d'une personne de 30 ans. Ce n'est pas perceptible dans la peau intacte, mais cela a des implications pour la cicatrisation des plaies, avec un risque accru d'infection secondaire.

Autres facteurs

Les médicaments, par exemple les stéroïdes, peuvent accroître la fragilité de la peau; les anticoagulants aggravent l'hémorragie sous-cutanée qui se produit plus facilement avec l'âge.

L'œdème chronique est un facteur de risque en raison de la diminution de l'oxygénation des tissus, la réponse inflammatoire, par exemple la dermatite de stase; un traumatisme mineur peut mener rapidement à la dégradation rapide de la peau, et la guérison des blessures ou des ulcères est lente.

Le rôle de la pression

Le terme « ulcère de pression » indique une des principales préoccupations reliées aux dommages de la peau. Il est intéressant de noter que dans le milieu des années 1970, le rôle de l'humidité avait aussi été établi, mais n'avait pas tellement été étudié avant les années 1990. Les recherches continues dans le rôle des problèmes de peau causés par la pression ont révélé que ce n'est pas seulement la pression sur la peau contre une surface qui doit être considérée, par exemple une quantité donnée de pression sur une courte période de temps peut être tolérée, alors que la même pression sur une période plus longue causera des dommages à la peau; de façon similaire, si la pression sanguine baisse, la même quantité de pression cause plus de dommage puisque la circulation de la zone est compromise. Les blessures dans les tissus profonds sont suspectées de débuter dans le muscle lorsqu'une pression d'une proéminence osseuse exerce une pression intolérable sur les tissus adjacents. Ce dommage devient apparent sur la peau, mais il ne provient pas de là.

Pour comprendre les forces mécaniques qui contribuent aux dommages sur les tissus, nous ne devons pas considérer seulement la pression, mais la friction et le cisaillement. La friction est la force qui prévient le mouvement entre deux surfaces parallèles. Le cisaillement réfère au mouvement d'une couche de tissu contre une autre. Lorsqu'un patient est couché sur une civière et que la tête du lit est surélevée, la friction contre le matelas et les draps retient la peau du patient contre la surface; le cisaillement permet à la structure squelettique d'être tiré vers le bas par gravité. Les dommages aux tissus peuvent se produire sur la peau en glissant sur la literie; les tissus internes peuvent être endommagés, car les os créent une pression et un mouvement dans le corps. En considérant la diminution de l'élasticité d'une peau vieillissante, la fragilité des vaisseaux sanguins de liaison et la diminution de l'épaisseur de la peau, il est facile de constater que des dommages peuvent survenir rapidement. Une humidité excessive sur la peau contribue à accroître la friction lorsque le patient bouge contre la surface qui le supporte.

Humidité

L'humidité peut contribuer à elle seule aux dommages sur la peau. La dermatite associée à l'incontinence (DAI) se manifeste comme des rougeurs sur la peau dans les zones exposées à d'autres irritants. Des zones ouvertes d'épaisseur partielle peuvent se développer; elles peuvent être différenciées des plaies de pression, car elles ne sont généralement pas situées au-dessus de proéminences osseuses; elles peuvent survenir dans les plis de la peau. Il est important de déterminer l'étiologie, car le traitement n'est pas le même pour les zones de pression, mais lorsque la peau est endommagée par la DAI, elle est plus susceptible aux blessures causées par la pression, la friction et le cisaillement.

Le risque de développer une DAI augmente avec les peaux plus vieilles, une utilisation prolongée de stéroïdes, la douleur, une détérioration de l'oxygénation de la peau, la fièvre, une mobilité réduite et l'incontinence urinaire; le facteur le plus fortement associé avec cette condition étant l'incontinence fécale, particulièrement lorsqu'elle est causée par des facteurs iatrogènes par exemple la diarrhée C.Difficile ou l'alimentation par une sonde.

Des produits occlusifs ont été trouvés pour augmenter la température de la peau, conduisant à la transpiration; cela peut élever le pH, augmenter la perte en eau de la peau et compromettre la fonction de barrière.

Les produits d'incontinence imbibés augmentent la pression d'interface des tissus, même lorsqu'ils sont utilisés sur une surface de réduction ou de soulagement de la pression.

Les selles liquides sont particulièrement dommageables pour la peau, possiblement à cause de la concentration d'enzymes digestives et des bactéries qui prolifèrent dans un environnement humide, chaud, en présence d'occlusion et de peau endommagée.

Une remarque à propos sur la dermatite intertrigineuse qui se manifeste comme de la rougeur et une macération dans les plis de la peau, parfois le candida ou d'autres organismes. Comme avec les autres zones de la peau endommagée à cause de la chaleur, de l'humidité et de l'irritation chimique, ces zones, ces zones bénéficient de soins en douceur avec un nettoyant pour la peau appropriée et en évitant de surchauffer. Dans le passé, des traitements topiques variés ont été tentés pour obtenir un environnement sec, y compris des gazes, des linges comme des serviettes et des serviettes de papier. Le consensus actuel est que ces produits, tout en absorbant d'abord l'humidité excessive, fournissent par la suite un environnement humide et devraient donc être évités.

Conseils pratiques

- Inclure l'intégrité de la peau dans une évaluation globale, en particulier chez les patients ayant une perte de sensation ou de la capacité à communiquer un inconfort. Les patients ayant subi un accident vasculaire cérébral, une blessure de la moelle épinière, les diabétiques ou une neuropathie ou avec un niveau de conscience ou de démence pourraient être incapable d'identifier les zones de douleur. L'évaluation de la peau est comprise dans « l'exposition » et « Inspection des surfaces postérieures » lors de l'évaluation secondaire. Des points avec une peau à pigmentation foncée peuvent ne pas satisfaire les critères pour la phase 1 des ulcères de pression (rougeur); observez tout changement dans la couleur de la peau au-dessus des proéminences osseuses comparées à la peau environnante et validez les changements dans la sensation, y compris la douleur dans la zone.
- L'échelle de Braden est souvent recommandée pour évaluer le risque de dommages à la peau
- Limitez l'utilisation de produits d'incontinence occlusifs, par exemple, lorsqu'un patient doit être déplacé pour un examen (ex. : radiographie, ambulatoire). Des alèses jetables sont préférables lorsqu'un patient est alité. Si la continence peut être maintenue par une toilette normale, c'est encore mieux.
- Le traitement de la DAI, et même la prévention, comprend le nettoyage des tissus du périnée des patients incontinents en utilisant un nettoyant sans rinçage ayant un pH près de celui de la peau, approximativement 5,5. Ne frottez pas, puisque la friction peut contribuer à endommager la peau. Après le nettoyage, appliquez un hydratant pour restaurer l'humidité de la peau, et une crème barrière pour protéger la peau contre les selles, l'urine ou l'humidité excessive provenant de la transpiration.

- Spécialement avec les surfaces de support thérapeutique, évitez les couches entre le patient et la surface. Les élingues de levage peuvent contribuer à des zones d'humidité sous les patients : retirez-les lorsque ce n'est plus nécessaire.
- Assurez-vous que la literie sous les patients est douce et sans peluches afin d'éviter des zones localisées de pression accrue.
- La fréquence de changements de position requise pour chaque patient est une évaluation individuelle; un repositionnement aux 2 heures est recommandé pour commencer, avec des changements dans la fréquence faite si nécessaire. Évitez de positionner sur des zones ouvertes, mais si c'est inévitable, limiter le temps dans une telle posture à une heure, et surveillez la détérioration de la plaie.
- L'intégrité du talon est mieux gérée en enlevant entièrement la pression. Enlevez la pression sur les talons sur le matelas avec des oreillers et des supports sous les genoux afin de prévenir une hyperextension.

Comme plusieurs aspects dans les soins pour les adultes plus âgés, l'évaluation et les soins de la peau interagissent avec plusieurs autres systèmes. Nous avons remarqué que l'incontinence urinaire risque d'aggraver les dommages à la peau. Inversement, les produits occlusifs humides sont également considérés comme un facteur de risque pour augmenter les infections des voies urinaires alors les organismes de la peau se multiplient.

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Once in a lifetime

by Laila Brown

A member of Team Broken Earth recounts her life-changing trip to Haiti

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Once in a lifetime you may participate in something extraordinary—a journey changing your view of the world and how you participate within that world. The ability to help others and teach them to cope under extreme circumstances, and to provide care to one another is one of the greatest gifts of humanity. I was fortunate to be a part of Team Broken Earth 2011. This is my story.

An M_W 7 earthquake on January 12, 2010, left Haiti in dire need of outside medical assistance. More than three million people were affected by the earthquake. The death toll was so overwhelming that corpses crowded the streets and had to be buried in mass, unmarked graves by heavy machinery. Three hundred thousand people were injured and more than one million rendered homeless. Despite dwindling media attention, health care and sanitation remain top priorities for Haiti.

Helping Haitians by providing stable, focused and forward-looking medical assistance and training is paramount in the rehabilitation of Haiti. It is for these reasons Team Broken Earth was conceptualized by Dr. Andrew Furey. The team's mission is to establish and fund sustainable programs throughout rural Haitian communities, to train Haitian doctors, nurses, and allied health care workers, and to provide supplies, equipment and technologies to medical facilities in Haiti.

On my trip with Team Broken Earth in July 2011, 27 individuals travelled to Port-au-Prince, Haiti, and none of us will ever be the same. As one of 13 registered nurses, my role was to teach and provide care for the pediatric population presenting at the Bernard Mevs Hospital.

While working at the hospital, I experienced the devastation of the earthquake and the struggle of Haitians to survive and recover from the aftermath of the quake. The city remains in disarray. The presidential building still hangs in disrepair with its roof hanging off. People continue to be homeless and security is non-existent. Haitian children climb the broken walls of buildings, garbage lines the hillside, and adults sell their wares on the side of the road as a means of survival.

The pediatric unit consisted of NICU, PICU, pediatric ward, and a home to three orphans with special needs. Families would leave their children at the gate of the Bernard Mevs Hospital when they could no longer care for them.

It was not long before we learned that Haitians have a different expectation of their health care providers and hospitals. Haitians come to the hospital to die, while developed countries expect health care to save them. It was unfortunate, but unless they were critically ill, they did not get admitted to the gated hospital. No blood products were available. I remember one day when a family member needed blood as a result of a gunshot wound. The parent was sent out to get blood and bring it back to the hospital.

Thirteen RNs took part in the trip: Shirley Anne MacNeil, Carolyn Churchill, Geralyn Lambe, Jane Mulcahy, Robyn Noseworthy, Brenda Earles, Theresa Peacock, Lynn Anderson, Rochelle Mccarthy, Mary O'Brien, Laila Brown, Jacqueline Williams-Connolly, and Pamela Griffiths.

Me playing in a courtyard with a young girl. I had just given her my lunch and she was thanking me.

The parent brought back a unit of blood, not cross matched, just in a thermos bottle to keep it cool. We would hang the blood, as it was, because without it, the patient would die.

Children died of dehydration, head injuries, typhoid, cholera, and sepsis. Statistically, 35 per cent of children died before the age of five. Infant death was also high. Everyone was anemic due to lack of food and proper nutrition. Medicine for infections consisted of ampicillin, gentamycin, clindamycin, and vancomycin. Vancomycin was left for the most serious cases such as septicemia infections.

Surgical patients consisted of meningocele repair, cleft palate and lip, fractured femurs and elbows, and bowel obstructions from worm infestations—just to name a few. During our stay, our plastic surgeon Dr. Arthur Rideout made a few parents quite happy.

Our team was responsible for caring for more than 500 Haitian patients, both old and young. We helped run the hospital 24 hours a day for seven days. Team members worked every day to provide the best care we were capable of and to help as many Haitians as possible. While we were there, word got out that a medical team of 27 professionals, including a pediatric team, was helping at the Bernard Mevs Hospital. Referrals from various sources brought many Haitians in need to the gates of the hospital. The pediatric unit was filled to capacity with 18 patients in total. We cared for 28-week-old twins, one of whom

had necrotizing entercolitis. They are still doing well and will hopefully be out of hospital soon. We keep in touch with the Haitian nurses through Facebook. They update us regularly and send us pictures.

The people of Haiti have shown me how to hope in the face of despair and devastation. They laugh, attend church, embrace hope, and continue to survive in a world of chaos. I could go on and on... there were so many experiences. It is unfortunate that I cannot relay them all. My experience was truly life changing. I look forward to returning to Haiti in July 2012 with Team Broken Earth.

About the author

Laila Brown received a bursary of $500 through the Canadian Federation of Nurses Unions (CFNU) in support of her trip to Haiti. To learn more about CFNU's International Solidarity Fund, please visit: ***www.nursesunions.ca***

Team Broken Earth is a non-profit group of Eastern Health employees providing medical assistance to Haiti's earthquake victims. The team works in collaboration with Project Medishare to provide immediate and forward-looking medical care and training to Haitians. Team Broken Earth has become a tremendous force in Haiti, capable of caring for more than 500 patients a week. Thank you to all of the registered nurses, physicians and physiotherapists who have taken part. For more information, visit **www.brokenearth.ca**

Un jour peut-être

par Laila Brown

Membre de l'équipe de Team Broken Earth, Laila Brown raconte le voyage qui a changé sa vie.

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Peut-être aurez-vous un jour l'occasion de participer à un événement hors du commun, d'entreprendre un périple qui changera votre vision du monde et ce que vous faites dans le monde. La capacité d'aider les autres, de leur apprendre à affronter des conditions extrêmes et à se prodiguer mutuellement des soins est l'un des talents les plus précieux de l'humanité. J'ai eu la chance de faire partie de l'équipe *Team Broken Earth 2011*. Voici mon histoire.

Le 12 janvier 2010, à la suite d'un séisme de magnitude 7, Haïti avait un urgent besoin d'aide médicale. Plus de 3 millions de personnes avaient été touchées par le tremblement de terre. Le bilan était si lourd que les corps jonchaient les rues et qu'il fallait les ensevelir en masse dans des fosses communes à l'aide de machinerie lourde. Trois cent mille personnes avaient été blessées et il y avait plus d'un million de sans-abri. Même si l'attention des médias s'est estompée depuis lors, les soins de santé et l'hygiène restent encore aujourd'hui une priorité en Haïti.

Pour favoriser la réhabilitation du pays, il est essentiel d'aider les Haïtiens en leur fournissant une assistance médicale et une formation constantes, ciblées et ouvertes sur l'avenir. C'est précisément pour ces raisons que le Dr Andrew Furey a conçu *Team Broken Earth*. Cette équipe a pour mission d'établir et de financer des programmes durables dans les communautés rurales d'Haïti, de former des médecins, du personnel infirmier et des travailleurs de la santé haïtiens et d'acheminer des fournitures, de l'équipement et de la technologie aux établissements médicaux du pays.

Lors de mon voyage avec *Team Broken Earth* en juillet 2011, nous avons été 27 à aller à Port-au-Prince et tous, nous en sommes revenus transformés. J'étais l'une des treize infirmières autorisées, mon rôle consistait à enseigner et à offrir des soins en pédiatrie à l'Hôpital Bernard Mevs.

À l'hôpital, j'ai pu constater la dévastation causée par le tremblement de terre et tous les problèmes et les efforts de la population haïtienne pour survivre et se relever du cataclysme. La confusion continue de régner dans la ville. Le palais présidentiel est délabré et son toit crevé. Les gens vivent toujours dans la rue. La sécurité est inexistante. Les enfants escaladent les murs endommagés des bâtiments, les rebuts ont envahi les flancs de la colline et les adultes en sont réduits, pour subsister, à vendre leurs biens le long des rues.

Le service de pédiatrie comprenait des soins intensifs en néonatologie, des soins intensifs en pédiatrie, l'unité de pédiatrie et une maison pour trois orphelins ayant des besoins spéciaux. Les familles abandonnaient leurs enfants à la porte de l'Hôpital Bernard Mevs quand elles ne pouvaient plus s'en occuper.

Nous n'avons pas mis longtemps à comprendre que les Haïtiens ont des attentes différentes face au personnel de la santé et aux

Treize infirmières autorisées ont pris part au voyage : Shirley Anne MacNeil, Carolyn Churchill, Geralyn Lambe, Jane Mulcahy, Robyn Noseworthy, Brenda Earles, Theresa Peacock, Lynn Anderson, Rochelle Mccarthy, Mary O'Brien, Laila Brown, Jacqueline Williams-Connolly et Pamela Griffiths.

C'est moi en train de jouer dans la cour avec une petite fille. Je venais de lui donner mon dîner et elle me remerciait.

hôpitaux. Ils viennent à l'hôpital pour mourir alors que les patients des pays développés s'attendent à être sauvés par les soins de santé. C'était bien triste, mais à moins d'être gravement malades, les gens n'étaient pas admis dans l'enceinte de l'hôpital. Aucun produit sanguin n'était disponible. Je me souviens d'une journée où quelqu'un avait besoin de sang à cause d'une blessure par balle. Nous avons dû demander à quelqu'un de la famille d'aller chercher du sang et de le rapporter à l'hôpital. Il est revenu avec une unité de sang qui n'avait pas subi d'épreuve de compatibilité croisée, et il s'était simplement servi d'une bouteille thermos afin de garder le sang au frais. Nous avons administré le sang tel quel, car autrement le patient serait décédé.

Les enfants mouraient de déshydratation, de blessures à la tête, de typhoïde, de choléra et de septicémie. Selon les statistiques, 35 pour cent des enfants mouraient avant l'âge de cinq ans. Les décès de nourrissons étaient également nombreux. Tous souffraient d'anémie par manque d'alimentation et en raison d'une nutrition inadéquate. Pour traiter les infections, on avait de l'ampicilline, de la gentamicine, de la clindamycine et de la vancomycine. La vancomycine était réservée aux cas les plus graves, comme les septicémies.

Parmi les cas chirurgicaux, nous avions des réparations de méningocèle, des fentes palatines et des becs-de-lièvre, des fractures du fémur et du coude ainsi que des occlusions intestinales résultant d'infestations par des vers, pour ne citer que quelques cas. Durant notre séjour, notre chirurgien plasticien, le Dr Arthur Rideout, a fait la joie de plusieurs parents.

Notre équipe était responsable de prodiguer des soins à plus de 500 patients haïtiens, jeunes et moins jeunes. Nous avons aidé au fonctionnement de l'hôpital 24 heures par jour, sept jours par semaine. Les membres de l'équipe travaillaient chaque jour à fournir les meilleurs soins dans les circonstances et à aider le plus d'Haïtiens possible. Pendant que nous étions là-bas, les gens

ont entendu parler de l'assistance apportée à l'Hôpital Bernard Mevs par une équipe médicale de 27 professionnels, dont une équipe de pédiatrie. De nombreux Haïtiens dans le besoin ont été dirigés vers les portes de l'hôpital par diverses ressources. Avec 18 patients au total, le service pédiatrique était rempli au maximum. Nous avons pris soin de jumeaux de 28 semaines, dont l'un souffrait d'entérocolite nécrosante. Ils vont toujours bien et nous espérons qu'ils auront bientôt leur congé de l'hôpital. Nous restons en contact avec le personnel infirmier haïtien par Facebook. Les infirmières nous tiennent au courant et nous envoient des photos.

Le peuple haïtien m'a montré qu'il est possible d'espérer face à la désolation et à la dévastation. Les gens rient, vont à l'église, s'ouvrent à l'espérance et continuent de survivre au milieu du chaos. Il y aurait tant à dire… J'ai eu tellement d'expériences. C'est malheureux que je ne puisse toutes les faire partager. Ce voyage a réellement changé ma vie.

À propos de l'auteure

Laila Brown a reçu une bourse de 500 $ de la Fédération canadienne des syndicats d'infirmières/infirmiers (FCSII) pour son voyage en Haïti. Pour en savoir plus sur le Fonds de solidarité internationale de la FCSII, veuillez visiter le ***https://fcsii.ca****.*

Team Broken Earth est une organisation à but non lucratif composée d'employés d'Eastern Health. Elle a pour mission d'offrir une assistance médicale aux victimes du tremblement de terre d'Haïti. Elle collabore avec *Project Medishare* pour fournir aux Haïtiens des soins médicaux et une formation dans l'immédiat et en vue de l'avenir. *Team Broken Earth* est devenue une force importante en Haïti, capable de prendre soin de plus de 500 patients par semaine. Merci à tous les infirmiers et infirmières autorisés, aux médecins et aux physiothérapeutes qui ont participé au projet. Pour plus d'information à ce sujet, visitez le **www.brokenearth.ca**

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Body of evidence: A geriatric trauma case study

By Margaret Dymond

Abstract:

Geriatric trauma patients presenting to emergency departments have special needs to be considered during all phases of the assessment, planning, intervention, and evaluation phases of the trauma process. Considerations to the normal physiologic process of aging, pre-existing medical conditions, and medication use will influence the geriatric patient's response to care and treatment. This case presents some interesting issues during the trauma resuscitation and how the care plan required adaptation to the usual trauma interventions. Reassessments are key to determining the problem area and understanding the physiology of aging. The case discusses a frequent type of mechanism of injury in the geriatric population but a not so common injury.

Key words: geriatric trauma, older adult falls, effects of anticoagulants, hypotension in older adults

Introduction

Geriatric trauma patients, described by Calland et al. (2012) as generally over age 65 years, are challenging to manage, and account for a significant number of emergency department visits and hospital admissions. Cutugno (2011) states that older adults account for 25% of all hospital trauma admissions and by 2050 it is estimated that 40% of trauma patients will be > 65 years of age.

To improve outcomes in geriatric trauma patients and planning interventions, the trauma team should recognize that assessment during the primary and secondary survey includes understanding the unique physiology of age and related changes to body systems, presence of co-morbid conditions, and poly pharmacy use that may affect the patient's response to care (Bourg et al., 2012). Both Calland et al. (2012) and Cutugno (2011) agree that these are factors to consider when planning care and evaluating the patient's response to resuscitation.

Objectives

- Review the age related changes to organ systems in geriatric patients
- Review the importance of assessing for the presence of co-morbid factors and poly pharmacy use when planning and evaluating care
- Discuss the importance of serial reassessments in trauma patients

Initial case presentation

A 79-year-old female loses her balance and falls down 12 steps onto the basement landing in her home. She was attempting to let the dog outside and "forgot" she was close to the basement steps. The fall was heard by the family. The family members found the patient on the bottom step, escorted the patient up the stairs into the kitchen area and called 911.

Emergency Medical Services (EMS) arrived on scene at 1950 hours with the patient sitting upright in a chair.

Fact: Body of Evidence

The Alberta Centre for Injury Control and Research (2011) and Aschenasy et al. (2006) state the most common mechanisms of injury in geriatric trauma patients are motor vehicle crashes and falls. Falls carry a special risk; 20% of the elderly population greater than 80 years of age will die within one year of a hip fracture and geriatric patients who fall have injuries that tend to be more severe than injuries sustained by younger patients from similar falls (Aschenasy et el, 2006).

EMS found the patient with regular respirations (RR) at 18 per minute and non-laboured. The air entry was equal bilaterally and chest sounds clear. Oxygen saturation was unobtainable. The radial pulses were irregular and weak at 68 beats per minute (bpm). The skin was moist and cool to touch. Blood pressure (B/P) was 76/40. There was no evidence of external bleeding. The Glasgow coma score (GCS) was 12 out of 15 with inappropriate answers to questions. Pupils were equal and reactive. The patient and family report no loss of consciousness.

The pre-hospital team findings on the secondary survey found no abnormality to the chest or abdomen. The patient had

Table 1.

Past Medical History	Medications (Generic name)
Ischemic Heart Disease, MI Angioplasty and Stent in 2008 Hyperlipidemia Hypertension Transient Ischemic Attack, 2012 Chronic Renal Failure Thyroidectomy for Cancer, 2010 Chronic Obstructive Lung Disease Smoker x 50 years Glaucoma Osteoporosis	Clopidigrel 75mg daily Enteric coated Aspirin 81mg daily Levothyroxine 0.05 mg daily Amlodipine Besylate 5mg daily Atorvastatin 40mg daily Fluticasone propionate and Salmeterol oral inhaler 250/50 1 puff twice daily Vitamin B12 monthly, Vitamin D 1,000 IU daily Calcitrol (Vit B3) 0.25mcg PO every other day Latanoprost eye drops

evidence of bruising to the left buttock and complained of pain to the head, left hip, and left shoulder. The patient was incontinent of urine. The patient's past medical history and medications are found in Table 1. EMS interventions included C-spine immobilization, oxygen at 3 litres per nasal cannula, intravenous fluids (IV) of normal saline 500 millilitres (mLs), cardiac monitoring with noted global ST segment depression, and a blood glucose of 14.8 mmol/L.

Based on the EMS pre-hospital assessment, should this patient be transferred to a designated trauma facility?

Geriatric patients can be under triaged to trauma facilities (Calland et al., 2012). Under triage occurs when there is failure to recognize the unique physiology of older adults and response to injury in this population. Older adults have a limited cardiovascular reserve and often have pre-existing medical conditions (PEMC) that influence response to injury. The Eastern Association Surgery and Trauma (EAST) (Calland, 2012) suggests those patients with advanced age (> 65 years) and PEMC should lower the threshold to transport to a designated trauma centre. Age is not an independent predictor of trauma outcome and should not be used for denying or limiting care (Cutugno, 2011).

Case progression

This patient was transferred to a trauma centre based on mechanism of injury, altered GCS, and presence of hypotension. She arrived 1.5 hours post fall at 2100 hours. The patient is a frail, thin, and pale-appearing older female in some distress. The airway is open and clear. The RR is 16 breaths per minute. Breath sounds are equal and clear and air entry is equal bilaterally. There is pain to palpation on the left anterior chest. Oxygen saturation is 96% on 3 litres of oxygen per nasal cannula. The patient's skin is pale, cool, and dry. B/P is 100/36 mmHg. Peripheral pulses are weak. Capillary refill time is greater than 3 seconds. Heart sounds are normal. The patient is placed on a cardiac monitor and is in normal sinus rhythm at 69 bpm. The GCS is 13/15. The pupils are equal and reactive. The patient has poor recall of the fall. There is no external bleeding. The abdomen is soft to palpation with faint bowel sounds. The pelvis is stable. Other physical findings include occipital swelling, hematoma over the left humerus, bruise left buttock and right hand, and pain in the left shoulder and left hip. The patient is log rolled to the left side. The posterior exam and rectal examination is normal. The rectal temperature is 32° Celsius. See Table 2 for working problem list.

Table 2: Initial assessment problem list
• Mild Hypotension – Shock
• Poor peripheral perfusion
• Head Injury and altered level of consciousness
• Possible neck injury
• Possible chest, abdominal and pelvic injury
• Possible limb fractures
• Hypothermia

Initial ED interventions include trauma blood work including type and screen, radiography of the C-spine, thoracic spine and lumbar spine, chest, pelvis, left shoulder, left hip, and left scapula, and computerized tomography (CT) scanning of the head, c-spine, chest, abdomen, and pelvis. Two large bore peripheral IV sites are initiated with an IV bolus of warmed normal saline 1000 mLs over one hour. Additional interventions include a focused assessment sonogram for trauma (FAST) exam, external reheating, maintaining spinal precautions, Fentanyl IV for analgesia, cardiac and non-invasive B/P monitoring, continuous oxygen saturation, oxygen at 3 litres nasal cannula, and a 12-lead electrocardiogram (ECG).

Body of Evidence: Facts of Geriatric Trauma

The presence of four or more chronic medications increases the risks of falls in the elderly and more than 80% of patients evaluated after an accidental fall are found to be on medications easily implicated to the fall (Aschkenasy, 2006). EAST (Calland, 2012) geriatric trauma guidelines state PEMC and complications negatively influence outcomes. Older adults have a 9–10 fold greater chance of death if the systolic B/P < 114 mm/hg (Heffernan et el, 2010).

Case progression and reassessment

At 2140 hours the B/P has fallen to 81/40 mm Hg, heart rate is 81 bpm. Most initial laboratory testing is normal. The abnormal values include a lactate of 3.8mmol/L and a base deficit of -8.3 mmol/L. The hemoglobin is 112gms/L. Cardiac markers are within normal range. Elevated serum lactates could be signs of occult hypovolemia, hypoperfusion, and impending shock. An elevated base deficit is an independent risk factor for an adverse outcome in the elderly (Calland, 2012; Callaway et al., 2009). Additional interventions include a second warmed normal saline IV fluid bolus of 1000 mLs. The B/P normalizes for a brief period. See Table 3 for a summary of injuries.

Body of Evidence: Facts of Geriatric Trauma

Labib et al. (2011) report factors such as age, low GCS, C spine injury, requirement for blood transfusions, intubation, and infectious complications increase hospital mortality. Elderly patients with rib fractures have nearly twice the mortality as younger victims despite a lower ISS score and high GCS. Older persons are high-risk for major pulmonary complications (Aschkenasy, 2006).

Table 3: Summary of injuries
Type 2 odontoid fracture
Fracture 3rd and 4th rib left side
Fracture left shoulder and scapula
Soft tissue injuries to left shoulder, left hip, right hand, occiput
CT Head – no acute changes
CT Chest – rib fractures, bi-basilar atelectasis
CT Abdomen/pelvis – no acute changes, biliary stone
FAST exam – negative for fluid
12 Lead ECG – ST depression globally

Case progression, back to basics, and reassessment

At 0030 hours, the patient's vital signs are B/P 79/50, HR 72 bpm, RR 18/min, rectal temp 33° C and has received 3,000 ml IV fluid (warmed) of normal saline. The patient is poorly compensating. Her GCS is 14/15, chest is clear, heart sounds normal, abdomen is soft, and she complains of pain in her left hip.

Why is she hypotensive?

An approach commonly used to assess hypotension and cause for shock is using the CODE mnemonic as outlined in Table 4.

Response to trauma and the aging adult

Geriatric patients have an altered response to stress and a limited cardiovascular response due to the effects of aging (Cutugno, 2011). See Table 5 for age related physiologic changes. This patient's PEMC, the normal aging effects on body systems and experiencing a fall will have influence on her ability to respond to stress. The episodes of hypotension in this case can lead to further ischemia of the vital organs (brain, heart, lungs, kidney, liver) further compromising perfusion. The patient has PEMC adding complexity in her ability to respond to stress. Altered pulmonary, cardiovascular, and renal PEMC in addition to the injuries in this patient affected the overall clinical response.

An additional concern was the patient's hypothermia. Hypothermia can lead to poor cardiac function and a tendency for bleeding. At low body temperatures cardiac output falls, heart rate falls (American College of Surgeons, 2012) and hypothermia is associated with coagulopathy (Stevenson, 2014). Aschkenasy et al. (206) state elderly patients may be at risk for hypothermia when found lying exposed for long periods, poor heating in the

Table 4: Code mnemonic for shock

CODE	Patient issue
Cardiogenic	Cardiac injury Myocardial infarction Arrhythmias Poor cardiac function - cardiomyopathy
Obstructive	Tension pneumothorax Cardiac tamponade Pulmonary embolus
Distributive	Neurogenic Anaphylaxis Sepsis
Exsanguinating hemorrhage	External and or internal blood losses

Table 5: Review of age-related physiologic changes

System	Age-related changes	Potential complications
Pulmonary	Decreased cough and gag reflex Relaxed musculature of the oropharynx Alveolar loss Decreased elasticity chest wall	Aspiration Hypoventilation Altectasis
Cardiovascular	Cardiac reserve decreased Atherosclerotic changes Decreased sympathetic reserve Poor temperature control	Tissue hypoxia - ischemia Inability to manage stress Hypothermia
Neurologic	Decreased cerebral blood flow Cerebral atrophy Increased risk shearing injury Poor balance and proprioception Cognition impaired	Tissue Hypoxia - CVA Subdural hematoma Falls and fractures Confusion/delirium
Musculoskeletal	Loss of muscle strength/mass Decreased bone density/mass Decreased ROM of joints Decreased mobility	Falls Fractures
Renal	Decreased renal mass Decreased renal function Decreased sense of thirst	Tissue hypoxia – renal failure Decreased drug clearance Risk dehydration
Nutrition Metabolic Gastrointestinal	Malnutrition Decreased basal metabolic rate Decreased heat production Decreased GI motility	Anemia, slow healing Hypothermia Constipation
Cutugno et al., 2011; Aschenasy et al., 2006; Williams, 2003; Jagos, 2014		

home, hypothyroidism, sepsis, substance abuse, and low basal metabolic rate. This patient was last seen well a few minutes prior to the fall. Hypothyroidism and sepsis were considered in this case as potential reasons for the hypothermia. Warmed fluids and active external rewarming were ongoing interventions.

Case progression

The trauma team decides that combined factors are responsible for the ongoing problem with this patient's hemodynamic response to the injuries. These include a poor cardiovascular response due to her recent trauma (chest injury), PEMC of heart disease, cerebral vascular disease, renal disease, probable adrenal insufficiency and responsible for her cardiogenic shock state. Consideration was given to the patient's home medications and a possible antihypertensive overdose. This can be considered with persistent hypotension in patients with no source of hemorrhage (Aschkenasy, 2006). Calcium channel blockers may prevent peripheral vasoconstriction and this effect may contribute to hypotension (American College of Surgeons, 2012). Additional interventions include reversing the calcium channel blocker effects of her antihypertensive medication Norvasc on cardiac function and increasing her adrenal response in efforts to improve her perfusion and response to stress. The patient is given Glucagon 5mg IV, Calcium Gluconate 2 grams IV, Hydrocortisone100mg IV, and warmed saline fluid boluses. These interventions are expected to increase inotropic activity in the heart, increase vascular tone, and cardiac output. There is a transient rise in her blood pressure with these interventions but not for long.

Case reassessment: 0240 hours critical care team is consulted

The patient's current VS are: B/P 59/37 mmHg, HR 97, RR-12, oxygen saturation of 100% with ongoing oxygen administration, rectal temp of 34.9° C. Her GCS is 14/15. She has no complaints of shortness of breath or chest pain. Chest exam reveals air entry is equal, chest sounds clear, skin is pale, abdominal exam is normal and stool for occult blood is negative.

The patient has received a total volume of 3.5 litres of warmed normal saline, medications to improve cardiac function by reversing calcium channel blockade, and external re-warming. Additional interventions include review of systems (see Figure 1), repeat 12-lead ECG, repeat venous blood gas, troponin, and blood cultures.

Results of blood work and where is she bleeding?

The results of her repeat lab work includes Hemoglobin – 67 gm/L, second Troponin is normal, lactate 1.1 mmol/L, base deficit -8.5 mmol/L. There are no new changes on the 12-lead ECG. The trauma team performed another primary and secondary survey. All previous CT scans were negative for internal bleeding. A second FAST exam was performed and negative for chest or abdominal bleeding. A second log roll was performed, which revealed a very large left buttock hematoma. The development of the hematoma was related to her Plavix use.

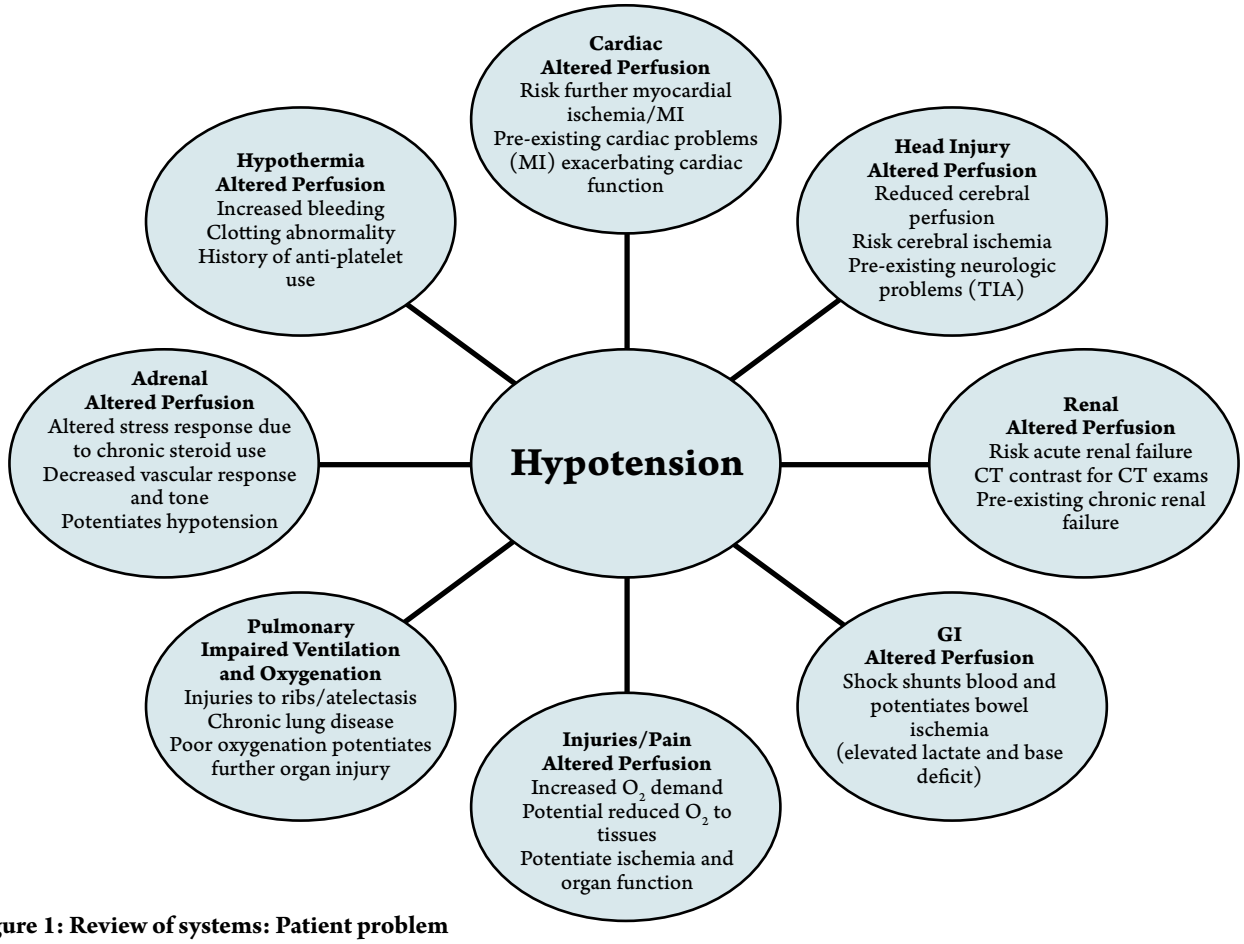

Figure 1: Review of systems: Patient problem

The trauma team was concerned regarding the hypothermia and link to increased bleeding risk and ongoing base deficit—a sign of decreased tissue perfusion (Callaway et al., 2009). The triad of hypothermia, acidosis, and coagulopathy increases mortality (Mikhail, 1999). Priorities include warming the patient and treating shock.

The ICU trauma team's Interventions include inserting an arterial line left radial artery, a central venous catheter in the right femoral vein, administering two units of Packed Red Blood Cells (PRBC), continue rewarming with external reheating, admission to the trauma observation unit, the spine consulting team to assess the neck fracture, and hold all anti-platelet agents.

Case progression and conclusion: 0430 hours

The patient responded to blood transfusions and rewarming. Her vital signs at 0430 hrs are B/P 122/55 mmHg, HR 102, RR19, rectal temp of 36° C, and an oxygen saturation of 98% with continued oxygen therapy. The repeat HGB at 0600 was 111gms/L. The patient was transferred and managed on the trauma unit and required no surgical management for her injuries. She had an endoscopic procedure to remove her asymptomatic biliary stone. She was discharged home after a three-week hospitalization and recovery period.

The patient returned to ED after discharge home within two days complaining of increased pain in her left buttock and dizziness. Her hemoglobin was found to be 75 gms/L. She required a further transfusion of two units PRBC for an expanding hematoma in her left buttock. She was discharged five days later in good condition and has had no further encounters or admissions for any related problems to the fall.

Discussion

Geriatric trauma patients with PEMC and poly pharmacy use add a different dimension to trauma care. Although the priorities of care are similar in all age groups, older adults bring challenges to the resuscitation effort.

First, age-related changes to body systems are considerations when planning care. Function of the major organ systems in older adults is less efficient. The older adult may have a limited ability to respond to the stress of injury. In this case, the patient's fall combined with her pre-existing medical conditions (PEMC) affected the system's response to stress. The hypotension will further decrease perfusion to organ systems that already are compromised potentiating further ischemia and organ injury. The presence of PEMC increases mortality independent of the aging process (Aschenasy, 2006).

Second, the patient's PEMC affected the stress response to injury (Jagos, 2014). Her pre-existing cardiac status combined with the hemorrhage in the buttock affected the cardiovascular response to stress. Hypotension can worsen the cardiac response with poor overall perfusion to organ systems further complicating the clinical picture (Heffernan et al., 2010). Geriatric patients are more sensitive to volume overload due to cardiac disease (American College of Surgeons, 2012). When treating hypotension, Jagos (2014) recommends consideration of smaller fluid boluses and observing for signs of fluid overload. This would be an important consideration in this case. The patient has limited cardiac reserve and will not tolerate large volumes of fluid. Inotropic support should be considered when fluid therapy fails to achieve goals for perfusion. Administration of PRBCs can increase oxygen carrying capacity and improved oxygen delivery to tissues.

Third, trauma patients can have injuries not so obvious to the team after the initial primary and secondary surveys are accomplished and routine investigations finished. This patient had a unique injury and presentation. The trauma team should keep focused on the interventions ordered and the patient's response. Reassess the patient's physical response to injury frequently and consider the age-related changes and PEMC when performing the reassessments.

A fourth consideration is the patient's rib fractures and associated atelectasis, and scapular fracture. These are injuries related to a direct blow. Rib fractures are concerning injuries in elderly patients who have a higher mortality than younger age groups with similar injuries (American College of Surgeons, 2012). Atelectasis is a more frequent complication of rib fractures in the elderly. These injuries combined with the normal changes of aging and decreasing pulmonary reserve can lead to respiratory failure quickly. A failing cardiovascular system and pulmonary reserve in this patient due to injuries and pre existing conditions will contribute further to acidosis and alter tissue and organ perfusion.

Another factor in geriatric care is discussion regarding existing advanced directives or goals of care. The trauma team should identify the patient's wishes when planning care. Evidence supports that age significantly increases mortality from injury but early aggressive care has been shown to improve survival (American College of Surgeons, 2012).

Another issue in geriatric care is elder maltreatment. ATLS (American College of Surgeons, 2012) defines elder maltreatment as any willful infliction of injury, unreasonable confinement, intimidation, or cruel punishment that results in harm. The trauma team was concerned regarding the mechanism of injury and unexplained hypothermia. The patient was interviewed by four or five consulting services. The story did not change, so elder maltreatment was ruled out.

Summary

The geriatric trauma patient is a unique and special population. Knowledge of the aging process with the physiologic change and the impact of PEMC on the stress response to injury assist the trauma team to plan interventions tailored to the patient. When the end goals of resuscitation are not achieved, serial reassessments are required with a thorough review of body systems, PEMC, medication use, and review of diagnostic imaging to determine the problem and plan care.

Factors associated with increased hospital mortality in the geriatric population include age, low GCS on arrival, the need for endotracheal intubation, the requirement for blood transfusions, and complications from hospital admission

(Heffernan et al., 2010). Implications for emergency nurses are to have care and attention to the unique challenges with elderly patients. Customizing the care plan can influence the response in a positive manner despite the odds of a less than optimal outcome.

The key to successful resuscitation in this vulnerable population is early aggressive care (Labib et al., 2011). Other considerations for emergency nurses includes injury prevention strategies in daily assessments (falls prevention), assessing elderly trauma patients for maltreatment during the trauma assessment, and including goals of care or advanced directives, as appropriate.

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FORENSIC NURSING

Interview with Colleen Varcoe

Introduction

Dr. Colleen Varcoe, PhD, RN, is a Professor at the School of Nursing, University of British Columbia. She has received numerous awards for her extensive research in violence against women and ethics. She was the recipient of the 2006 National Emergency Nurses Affiliation Award of Excellence in Nursing Research. Dr. Varcoe recently was a keynote speaker at the International Association of Forensic Nurses (IAFN) conference in October, 2014 in Phoenix, Arizona. Her UBC profile has a list of her publications and can be found at **http://www.nursing.ubc.ca/faculty/biopage.aspx?c=15.3297097167559**

1. What are your current professional roles?

I am a professor in the School of Nursing at the University of British Columbia. As a professor, I teach nursing students from undergraduates to doctoral students, and conduct my program of research focused on structural and interpersonal violence and all forms of inequity.

2. You have a varied nursing background; can you tell us how you came to be doing what you are doing?

I became a nurse, in part, because my mother was a nurse, and I both respected her and had a sense of the role through her. Initially I saw nursing as a way to gain employment to support me through medical school. However, encountering the wide scope and diversity of nursing, I quickly discovered that I would far rather be a nurse than a physician any day! I do research in the area of violence

and inequity for a range of personal and professional reasons. First, as a child, I experienced and witnessed considerable violence in my home, perpetrated by my stepfather. This fuelled my passion for contributing to a more effective social

response to violence against women and children. It also fuelled my passion for understanding how interpersonal violence is perpetuated and linked to structural violence. For example, my stepfather was raised in an orphanage, was homeless in the 1930s and spent four years as a prisoner of war, as a Canadian soldier during World War II. Second, as an emergency nurse, I was troubled by the many contradictions between the kind of care nurses want to provide, and what is possible—how our practice is constrained by stereotypical thinking, medical priorities and "business" priorities that create policies that are counter to good nursing practice and the well-being of our patients. This led me to want to help nursing practice be more effective, specifically in relation to all forms of interpersonal and structural violence, and generally.

3. Tell us about your latest project *i*CAN?

Icanplan4safety is an internet-based resource for women who experience violence. Less than 20% of women in Canada who experience violence access violence-related services. Some women don't identify themselves as abused, some don't know what services are available, some do not think the services are appropriate for them, some fear being stigmatized or judged, some women can't access resources (for example, because of transportation, child care, or because they live in rural settings); for some women it is too dangerous to access services. ***i*CAN** provides a safe, confidential resource that helps women to assess their risks, evaluate their own priorities and decisions, develop an action plan, and connect to services. The woman logs on using a confidential email and safe browsing practices, and works through a series of activities, including strategies to support her health and safety and that of her children. A personalized, tailored action plan is created using the information she provides about her situation and preferences. The action plan offers her strategies she can use herself, and helps her to connect to a range of resources. The woman can modify her information and plan as often as she likes. We are testing whether ***i*CAN** will improve the health and safety of diverse women.

4. You work with vulnerable populations. What inspires you to do so?

Vulnerability is not located 'in' people; it is created by situations—that is people are not "at risk people", they are people in situations that put them at risk. I am deeply concerned with unfair situations that put people at risk and make them vulnerable. I am deeply concerned about the social injustices done to people through their life circumstances, and I want to help nurses reduce risks for people. Common ideas encourage us to think that people are responsible for their own health and lead us to place considerable blame and judgement on individuals and to overlook how poverty, racism, gender-inequity, ableism, and other influences beyond individual control, are the greatest determinants of health. I am committed to developing knowledge that will shift focus onto changing unfair social arrangements, and to supporting nursing's contribution to such shifts.

5. Nursing today faces many challenges. What would you change in nursing education to prepare nurses for those challenges?

I would like to ensure that nurses have a solid understanding of how politics and economics shape health and health care. Nurses need to understand that the health, well-being and choices of the patients they see are mostly influenced by their social and economic circumstances. Such understanding is essential for nurses, so they don't practise uncritically based on the naïve idea that people are "responsible" for their health and health behaviour. Such understanding also allows nurses to see how their own practice is shaped by political and economic influences, and provides a basis for taking actions within their organizations and the wider social context. The greatest potential for nurses to influence health is at these broader levels.

6. What do you like most about being a nurse?

First, the diversity of opportunities for nurses is infinite. And through this diversity there is endless potential for learning and developing as a person. In my career I have worked clinically in emergency and a range of critical care areas. I have taught in diverse clinical areas and at all levels from first year to doctoral studies. I have engaged with people in research in many settings including emergency units, primary care clinics, and rural and Indigenous communities. And through these experiences I have learned something new every day. Second, nurses have a tremendous potential for making meaningful contributions in the world—for "doing good". Whether I am connecting with and supporting an individual patient or family member, working with nurses to enhance their practice or learn to do research, or partnering with policy makers or administrators, as a nurse I always feel I am making a worthwhile contribution.

7. What is your favourite "down time" activity.

My husband and I have a paragliding school "FlyBC"—I love flying myself and taking others on tandem flights, then landing at my farm for some gardening!

Thank you so much for doing this.

Sheila Early
Immediate Past President
International Association of Forensic Nurses 2015